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[Guide] Lenovo T450 macOS Mojave Complete Build (All Mac features working beautifully)

Tags: 2015, broadwell, guide, hd5500, intel core i7, lenovo, mojave, t450, thinkpad, Edit

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Oct 8, 2018 at 10:52 PM



Jsassu20



Current Build Specs (All Functioning Properly)

Lenovo ThinkPad T450**Intel Core i7 5600U Dual Core @ 2.7 GHz/s****Turbo Boost Capable Up To 3.7 GHz/s (UEFI Controlled)****Realtek 4-in-1 memory card reader (SD, MMC, SDHC, SDXC)****Realtek Audio With Line In/Out and Built In Mic (For Siri, FaceTime)****Front Facing Camera For FaceTime Video Chatting (720p Resolution)****Intel 1GB/s Wired Local Area Networking Ethernet Port (Gigabit Internet)**

SanDisk 16GB 42mm m.SATA Cache SSD Drive (Originally For IRST Now SSD Caching)

Mini Display Output With Sound Functioning At Up To 2k External Resolution Output

Intel HD 5500 Graphics (Integrated) (Running with 1.5 GB Of Available Video Memory)

16 GB Crucial DDR3 1600mhz (2x8) (Dual Channel Ram) (Model CT102464BF160B.M16)

Samsung PM851/840 EVO 1TB m.2 SSD (520 MB/s R/W Speeds) (Model MZ-MTE1T0BW)

Samsung 840 Evo 2.5" 500 GB SATA SSD (520 MB/s R/W Speeds) (Model MZ-7TE500BW)

Dual battery Setup (DSDT Patch required for best setup and power level reporting accuracy)

1080P FHD IPS LG LP140WF6(SP)(C2) Display from T450s (Replaced stock AUO 1600x900 TN Display)

Synaptic One Button Trackpad from T440s (Replaced 3 button Trackpad for better functionality with macOS)

Dell DW1820A Wireless A/C Bluetooth 4.1 LE (Replaced original WiFi BT hardware to complete macOS functionality)

Not Functioning (Because macOS Doesn't Support It)

VGA Out Port

Fingerprint Sensor

ThinkPad Dock Connector

Trackpoint Functionality

Intel Rapid Start Technology (Disable in BIOS and Use 16 GB SSD for Caching)

Fully Functioning HackBook Pro Running macOS Mojave Perfectly

AppStore Purchases, iMessage, FaceTime, Instant Hotspot, Continuity, Handoff, AirDrop, iTunes Purchases, System Update, Siri, Metal, Sleep, Power Settings, Backlight Control, Touchpad Gestures (3 and 4 Finger Including Swipes) AirPort Extreme Functionality, Bluetooth, Location Services, Final Cut Pro and other content creation software works beautifully (provided you aren't trying to create 4k videos with crazy effects while doing 20 other things at the same time), Photoshop Functionality, and just about all other macOS native features that I've tested have remained operational on my computer since completing this build and the only step which needed extra effort was setting up the Airport/Bluetooth Card. This is a fully functional Hackintosh build that's running on a solid and stable Lenovo ThinkPad t450.

During the actual installation your computer WILL RESTART at least one time, possibly more. This is normal and all you need to do is select the partition that you're installing macOS to. So when you begin the install you'll select the option labeled "Install macOS from Install macOS". When the computer reboots do not select that option again, instead select the new option which says "Install macOS from {whatever you named the drive you're installing to when you formatted the disk with disk utility}". Once you select this option then the installation will continue from where it left off. If it restarts again then do the same thing until it finishes. When it's done it will restart again and then just boot from the drive you installed to (it shouldn't say "Install" at all). Then you can proceed with the setup process***

UEFI BIOS Settings

-Main- PAGE 1

UEFI Bios Version: JBET71WW (1.35)

Intel Management Engine FW Version: JBHT17WW (1.04)

Model Number: 20BV0001US

CPU: Intel Core i7-5600U

Memory: 16384 MB

UEFI Secure Boot: Off

-Config- PAGE 2

Network

Wake On Lan: Disabled
UEFI IPV4: Disabled
UEFI IPV6: Disabled

USB

UEFI Bios Support: Enabled
Always On USB: Enabled
Charge in Battery Mode: Enabled
USB 3.0 Mode: Enabled

Keyboard/Mouse

Trackpoint: Disabled
Trackpad: Enabled
Fn Ctrl Swap: Sisabled
Fn Sticky Key: Disabled
F1-F12 Primary: Disabled

Display

Boot Display: ThinkPad LCD
Total Graphics Memory: 512 MB
Boot Time Extension: Disabled

Power

Intel speed step: Enabled
Mode AC: Max Performance
Mode Battery: Battery Optimization
Scheme for AC: Max Performance
Scheme for Battery: Balanced
CPU Power Management: Enabled
Power On With AC: Disabled
Intel Rapid Start: Disabled

Beep and Alarm

Password Beep: Disabled
Keyboard Beep: Disabled

CPU

Intel Hyper Threading Technology: Enabled

Intel AMT (Active Management)

AMT Control: Permanently Disabled (**Caution**)

This can't be enabled again after selecting "Permanently Disable". If you might end up using this then just choose "Disable"

-Security- PAGE 3

Password

All passwords are unset

Fingerprint

Predesktop Authentication: Disabled
Reader Priority: Internal Only
Security Mode: Normal

Security Chip

Security Chip Selection: Intel PTT
Security Chip: Disabled
Physical Presence Provisioning: Disabled
Physical Presence Clear: Disabled

UEFI Bios Update Option

Flash BIOS updating End User: Enabled
Secure Rollback Prevention: Disabled

Memory Protection

Execution Prevention: Enabled

Virtualization

Intel Virtualization Technology: Enabled

Intel VT-d Feature: Disabled

I/O Port Access

All except Fingerprint Scanner: Enabled

***You can install a functional m.SATA SSD in the slot that's designated as the Wireless Wan port which is located right next to the m.SATA port that holds the WiFi/BT card. There's also a chance you have the 3rd m.SATA extension port installed as well which can hold another mSATA SSD (I believe its only 3 GB/s and not 6 GB/s like the WAN slot). The port is an extension which screws in place and attaches to the mother board and its seated directly under the internal battery and is installed in place of a smart card reader. Keep that in mind if you have a need for more storage. In theory this computer can hold 3 separate storage modules (1x SATA 2x mSATA) so this thing has a remarkable amount of storage potential for an Ultrabook. Just make sure you get the proper size mSATA cards (22x44 mm I believe) since full size cards won't fit inside.

Internal Device Access

Bottom Cover Tamper Detection: Disabled

Internal Storage Tamper Detection: Disabled

Anti-Theft

Comptrace: Permanently Disabled (**Caution**)

This can't be enabled again after selecting "Permanently Disable". If you might end up using this then just choose "Disable"

Secure Boot

Secure Boot: Disabled

Platform Mode: Setup Mode

Secure Boot Mode: Custom

-Startup- PAGE 4

Network Boot: PCI LAN

UEFI/Legacy Boot: UEFI Only (**CSM Enabled***)

Boot Mode: Quick Boot

Boot Device List Option: Enabled

Boot Order Lock: Disabled

General Optimized Settings: Enabled (From Restart Page {Number 5})

Setup USB and Install macOS Mojave

This post contain basically everything necessary to install macOS Mojave on a Lenovo ThinkPad T450 as well as most Broadwell Lenovo Laptops from 2014-2016 with Intel HD5500 Graphics on either the i5 or i7 processors. The only exceptions being those laptops which shipped with dual graphics configurations like the T450s with the Broadwell based i5 which has on board 5500 graphics but uses the Nvidia Geforce 940m graphics chip as the main configuration for graphics functions. I'm almost positive that you can switch to the 5500 graphics configuration from the bios since its integrated in the processor and if that's the case then you should be able to follow this guide as well. I'm sure there are ways to get the Nvidia chip functioning just fine however I can't guarantee that some part of that chip isn't going to render those machines unable to install Mac for some reason because I don't have one to test this on but I know computers well enough to be about 75% sure it would be the same steps for the most part with the added step of finding your own method for enabling video acceleration. If Lenovo di enable the option to switch to the onboard HD5500 graphics then it should function exactly like the setups which this thread would apply to.

* Lenovo is usually very consistent with the type of hardware present in most models with similar chipsets in a given generation (Broadwell, Haswell, ETC..) of production Laptops under the "ThinkPad" brand because of its preference among business and education organizations which rely on its quality and the availability of parts along with the ease of repair. So if your model number is different but the gen, cpu, and graphics match then you should have no issue with installing this as well on your device and you can use this guide, however I am not responsible for potential damage to your device because its ultimately your responsibility to compare the hardware you have with my model from a detailed layout of specs.

Use clover installer in order to setup the needed EFI partition on your USB macOS Installer if there is not already the proper partition present on the device. Your USB should have 2 partitions. The first should be the EFI partition which the installer will create if its not there and the second should contain the macOS HFS+ partition (could be APFS too) and then there should be some unused space following that partition depending on the size of the use drive. All you have to do is mount the EFI partition of the USB drive and swap out the EFI folder with the one that I've attached that's designated as the USB installer's EFI folder.

So once the partition is mounted you'll see a new drive listed under /Volumes and its called "EFI". Inside of that drive is a folder called "EFI" swap out this folder with my "EFI" folder and you'll be good to go.

Setup permanent "CLOVER" folder following successful macOS install

Following the successful installation of macOS you'll want to repeat the process of installing clover again if this is a new install for your device and this time make sure you also install the RC scripts under the customize option. You'll also want to ensure you select the correct device as being the hard drive where your macOS install exists as this will be the permanent location for your clover files. Upon successfully installing Clover you'll want to mount the partition again and swap out the EFI folder designated as the permanent version from my files just as you did with the USB installer. With this Clover location I recommend you install the kexts to the system location as opposed to injecting them I've left a folder you can use for bot situations (Injecting them and installing them to the System) but keep in mind the system is not as stable when Injecting as it is with proper placement and loading of the kexts. The included archives contain one designated as the kexts to install to the system along with a program to make it easy and a written set of directions.

*****BEWARE***** If you dual boot with any other OS on your computer the DO NOT swap the entire EFI folder!!! Go into your EFI folder and instead, you want to swap the "CLOVER" folder with the same folder in my EFI location.

/EFI/EFI/CLOVER (for both the USB and main install HDD or SSD)

Also I've included my ACPI folder which you're more than welcome to try out for proper functioning of battery, backlight, and a few other things but if these features don't work it means you'll need to patch your DSDT and SSDT files. I've included a write up on how to do this below.

AirPort & Bluetooth: Dell Dw1820A PCIe Card (Purchase Required)

I recommend you purchase the Dell DW1820A PCIe Wireless A/C & Bluetooth 4.1 combo card since it costs less than every compatible PCIe card as well as most USB dongles that you'll get a decent connection from and it's supported natively (with a quick and painless modification). It supports functions such as Instant Hotspot, Continuity, AirDrop, and Handoff without any need for patching or messing around with settings. This is an actual chipset present in a handful of Macs so it's the perfect card for this build. The majority of supported WiFi cards cost \$40-\$50 more than this card and they are almost all older and slower whereas this is an A/C 866 MBP/s setup with Bluetooth 4.1 which makes it an absolute steal compared with all other options with a price tag between 10 and 30 dollars depending on where you look (I purchased mine for \$10 used on Amazon and it's a beast). The reason it's cheaper and more available than all other compatible cards for this build is because of the modification you need to do which as far as I am aware of, I seem to be one of the first people to have managed to figure out what was causing so much of the problems people were having with it which caused the card to become a scary choice for most individuals to risk trying to get up and running. I just couldn't pass up the 10 dollar price tag as well the challenge and even though it took about 2 weeks and over 50 hours of my time I finally figured out exactly how to get it working perfectly on this build (I would imagine it's also the case for any other computer which supports A+E NGFF PCIe cards) and it takes all of 5 minutes to accomplish.

In order to get it working just follow these instructions:

MAKE SURE YOUR KEXTS ARE ALL INSTALLED TO THE /System/Library/Extensions folder (FakeSMC.kext at the very least) as injecting seems to cause issues with random reboots for some systems. You can leave the essential kexts and set clover configurator to Detect kexts under the injection option in order to still be able to boot recovery. Also be sure to complete these steps before installing the card or disable Wireless LAN in Bios following the installation if you haven't yet completed these steps as the Wireless Lan causes the system to freeze because of a conflict in kext files which has been the cause of the card's issues and is what this guide is fixing in order for the proper wireless kext to load up and the hardware to function properly.

Reboot the computer and enter clover menu then boot from the recovery partition. Once it finishes loading up select the utilities menu from the top bar and choose Terminal. Enter the following command

`csrutil disable`

Now shutdown the computer and then power it back on and boot as you normally would with whatever drive your macOS partition is installed on.

First run these three commands from terminal (Applications/Utilities/Terminal)

****Your password will be required to be entered in order for these commands to succeed!**

```
sudo rm -r /System/Library/Extensions/AirPortBrcmNIC-MFG.kext  
sudo rm -r /System/Library/Extensions/IO80211Family.kext  
sudo rm -r /System/Library/Extensions/IO80211FamilyV2.kext
```

Next, open Kext Helper and drag the 3 kext files into the upper left hand box and then enter your password and hit easy install. Then hit "fix permissions" filled by run, then hit "rebuild cache" and run once more.

Next open terminal and type:

```
sudo rm /System/Library/PrelinkedKernels/prelinkedkernel  
sudo rm /System/Library/Caches/com.apple.kext.caches/Startup/kernelcache  
sudo touch /System/Library/Extensions  
sudo kextcache -q -update-volume /  
sudo kextcache -system-caches
```

After that's been completed then you want to shut down your computer (not restart, shutdown) then power it back on. Your device should start right up with both modules functioning but it may also reboot itself a few times as it attempts to start the system. If it does then don't panic, the system will boot successfully and function properly.

Now GO TO /Library/Preferences/SystemConfiguration FOLLOWING THE SUCCESSFUL INSTALL OF THE DEVICE AND DELETE:
NetworkInterfaces.plist & preferences.plist then shutdown the system and power it back on.

In order for iMessages and FaceTime to function properly. If WiFi device isn't recognized in the system as en0 then it can result in some features not working properly. This will reorder the network hardware to ensure its correct.

Make sure you keep this archive somewhere safe as it may require the process to be redone after a system update takes place, however I can not yet confirm that this is indeed the case.

How to patch DSDT and SSDT files

You may have to patch your own DSDT and SSDT files in order to get things like your brightness controls, power management, sleep mode, and any other sensors stuff like that. The process is not really hard but it's going to require you to read because I'm not going to be able to give you the proper guide without confusing you but the basic process is to do the following:

- Clear out the contents of the /EFI/EFI/CLOVER/APIC/patched & origin folders so that they are empty.

Restart the computer and enter the Clover screen and press F4 then boot normally.

Find pikers SSDT script and use it to get your SSDT file created automatically and then put that file into the "patched" folder that you cleared out before the restart. (Should be called SSDT.aml, rename it if needed)

- Download MaciASL , iasl, and, patchmatic from RehabMans repo and then unzip all 3 files

Move move iasl and patchmatic files to your home directory and then open terminal and execute the following commands

```
sudo cp iasl /usr/bin  
sudo cp patchmatic /usr/bin
```

- Delete the two files in your home directory and make a folder on your desktop named DSDT

Make a folder on your desktop and copy the files from the /EFI/EFI/CLOVER/APIC/origin folder (the ones that begin with SSDT or DSDT only) into the folder on your desktop. You can delete the ones which have "**x5_2-**" in the middle of their name because they aren't needed.

Open your terminal to the location of your folder on the desktop that contains those files you copied and enter the following command:

```
iasl -da -dl DSDT.aml SSDT*.aml
```

It will decompile all files from **.aml** files into **.dsl** files.... THE ONLY FILE YOU NEED IS **DSDT.dsl!** Remove it from that folder and put it on the desktop.

- Double click on your DSDT.dsl file and it will open maciASL (maciASL needs to be in Applications).

Hit "**compile**" and if you get any red lines then you need to fix them depending on what your computer is it will be different so you'll have to find those fixes. Click on each red line from the pop up box and it will show you the line in the DSDT.dsl file that needs to be patched in order to use the file. **Yellow warnings are ok to have so don't worry.** If you have no errors that's fine and you can still add patches for certain things.

Whatever patches you want to add are up to you but all you need to do is hit "**patch**" and then find the corresponding patch in the left hand menu or enter the contents of a patch you find elsewhere into the right widow on the upper half and then you will see the bar at the bottom indicate changes that are going to be made from that patch. Hit apply and then you just added a patch. You can continue adding patches to this same file. There are a few common patches which you should apply from the left hand menu one by one. So you find the patch and then select it from the left side and then you see the changes on the right side and hit apply then move to the next patch until you've finished. The common patches you should add are (**They will all be in the left side menu and begin with "sys" near the bottom of the list. Apply them one by one**)

"Fix_WAK Arg0 v2"
"HPET Fix"
"SMBUS Fix"
"IRQ Fix"
"RTC Fix"
"OS Check Fix"
"Fix Mutex with non-zero SyncLevel"

IVE INCLUDED ALL THE PATCHES THAT SHOULD BE APPLIED IN THE ARCHIVE LABLED DSDT PATCHES IN THIS FORUM AND UNDER MY FILES IN GOOGLE DRIVE. JUST COPY THE CONTENTS OF EACH FILE AND PATE THEM INTO THE RIGHT SIDE UPPER WINDOW WITH THE PATCH LIST OPEN WHERE YOU PICK EACH INDIVIDUAL PATCH FROM MACIASL.

When you finish close the patch window but not maciASL yet! Now hit compile again and make sure no red errors show up. Now click "file" and select "**save**" now click **file** again then chose "**save as**" and name the file **DSDT.aml** and make sure you chose ACPI Machine Language from the "File Format" selection box and save it to your desktop. Now take that file and add it into **/EFI/EFI/CLOVER/ACPI/patched** folder and then you're all set! You just patched your DSDT and SSDT files. Take the **DDST.dsl** file on your desktop and put it somewhere safe so that you can easily add more patches down the road without needing to start all over from the beginning.

PAY ATTENTION TO THE .dsl and .asl formats of each file and don't mix them up.

Miscellaneous information for the whole process

1. Make sure your bio settings are in order, disable CompuTrace all security chips network booting turn your video men as hit as you can, disable fingerprint sensor because you won't need it, to play around with a few other settings to get a successful boot if it doesn't work the beginning. Also make sure you enable CSM for UEFI booting because that's what you'll be using this is not a Legacy install.
2. Once you get the USB loaded for install, prepare the drive with disk utility and format it as APFS and then install to that drive. About halfway through the install the computer is going to restart it may even restart twice, that's normal the install did not fail are you need to do is instead of selecting an install Mac OS from install Mac OS you want to select install Mac OS from "whatever you chose the name your drive when you formatted it". If it restarts again do the same thing allowe to continue.
3. Once the install finishes go through the setup process take the contents of the install folder which will be just like you used for the USB installer instead move all those contents to the EFI directory of the Drive that used to install Mac OS on because this will be your permanent clover set up. Once you do that you should then be able to into Clover every time you start up and then go directly to your macOS. There are ways to configure it so that you can start directly in the Mac OS but you'll have to figure that out on your own.
4. If you have an Intel Wi-Fi card (of any kind) it will not work with macOS no matter how much time you invest into searching for a way to make it work! Don't waste your time! macOS does not support Intel based wifi modules because there are no Mac computers which come with one in them as of 2018. Mac computers almost always come with a Broadcom or Atheros based chipset for the AirPort wireless cards which are present in official Mac computers. It's possible that there may be Realtek based AirPort cards as well however I am not sure about this. I do know that almost all USB wifi modules utilize a Realtek based chipset and these are usually compatible with macOS provided you find the right next files and WiFi utility in order for it to function. If you decide to go with a USB module then keep in mind that you will not get the full functionality you would have with an official AirPort module such as AirDrop and Location Services. There is currently a project that's being developed to Port some Intel based WiFi cards to macOS and they've made a great deal of progress however they are still not functional so if you want WiFi then you'll unfortunately need to buy extra hardware. The LAN Port works fine for internet use and if you're going to get a USB module I suggest using the Asus USB-53 Nano Wireless A/C dongle Because I know for a fact it works with this build and macOS Mojave in general. You'll need to install the driver and wireless utility that comes with it or dl it from Asus' website and then reboot the computer and it will work. You can even open up the computer and unscrew the 3rd USB port that's seated next to the power port on the computer and then you can just plug the USB module in and push the board back from it's seating slightly then close up the case and then you'll have wifi without that little USB module sticking out of the side of the computer all the time. I did this for a few weeks and it works great however I paid 3 times as much for the USB dongle as I did for the Dell card which has all the features and a better connection rate.

5. If your computer is close enough to mine then there's a chance that everything that's in here will pretty much get you to about 90% of the

process of having a fully functional Hackintosh, without really needing to do anything. Unless your hardware is an exact match with mine then you'll need to patch your own DSDT and SSDT files though. This will honestly be the most difficult part of the operation for most beginners but once you understand what's happening and how to use maciASL then you'll see it's actually pretty simple to accomplish so be sure to read as much as possible in order to fully understand what's going on with each part of this entire process and that will put you in a good position to understand how easy this entire concept truly is thanks to the awesome software tool which have been developed for making macOS run on non Apple hardware. Rehabman has everything you need as far as information and essential kext/software goes!! Just search for him and you'll be able to figure it out everything and also make sure you respect the man's effort with what him and so many others have brought to the table for anyone else to use. This community is amazing and I'm being as detailed as possible with my guide because of how detailed my sources were while I was learning how to accomplish this. Keep that in mind if you come across info that could benefit the community and take the time to share it so more people can accomplish a successful build if they want to give it a shot with what they have.

Let me know if you need help or if you're in trouble and can't find a way out. My email is jsassu20@gmail.com and I get messages right to my phone so if you're in a bind then feel free to contact me and we'll figure things out.

Hopefully this gets you guys going! Good luck!

Useful Links

Where do I start? IF YOU'RE UNSURE OF SOMETHING MAKE SURE YOU'VE READ THROUGH THIS

<https://www.tonymacx86.com/threads/faq-read-first-laptop-frequent-questions.164990/>

Booting macOS X Using Clover

<https://www.tonymacx86.com/threads/guide-booting-the-os-x-installer-on-laptops-with-clover.148093/>

Problem Reporting

<https://www.tonymacx86.com/threads/tool-generate-proper-problem-reporting-files.235953/>

[Guide] Shimlee's Lenovo T450 Guide (Entire Setup for El Capitan to help get an idea of what's needed)

<https://github.com/shmilee/T450-Hackintosh>

[Guide] Lenovo ThinkPad T440

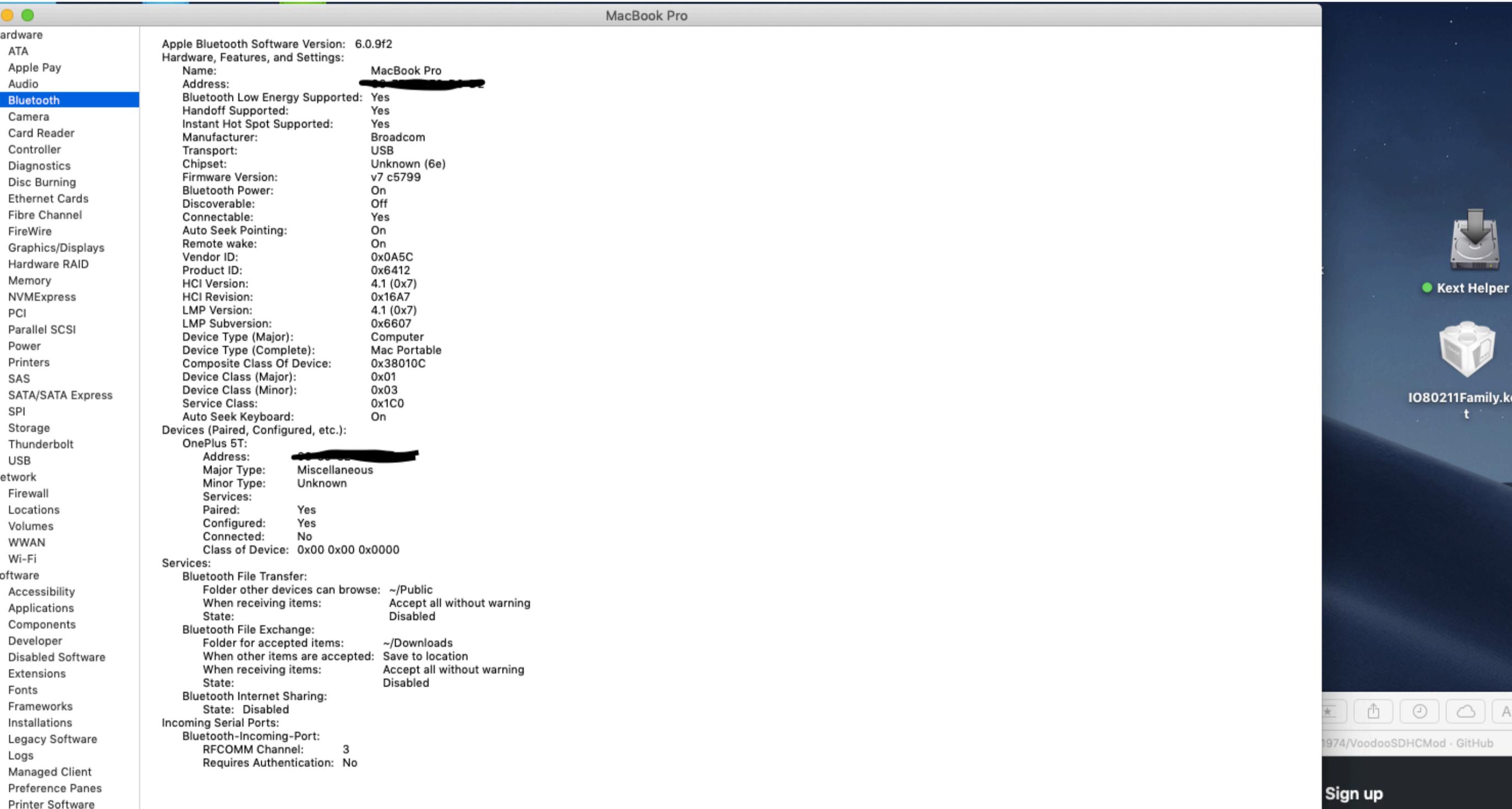
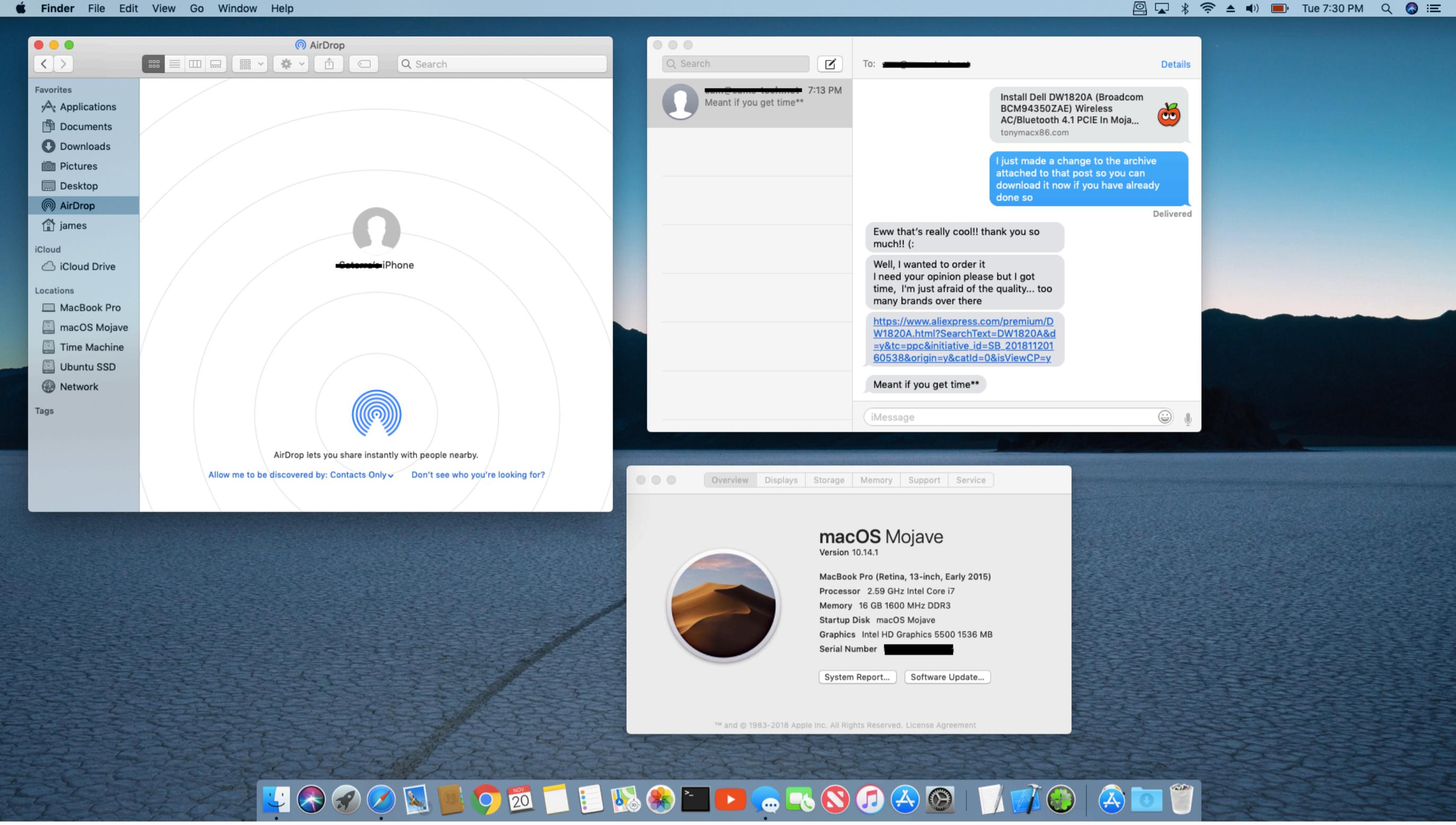
<https://www.tonymacx86.com/threads/guide-lenovo-thinkpad-t440.245562/>

[Guide] Lenovo X1 Carbon Gen 3 2015 Broadwell (Exact Same Hardware as Lenovo T450)

<https://www.tonymacx86.com/threads/guide-2015-x1-carbon-yosemite.162391/>

RehabMan's Kexts and Other Software (Bitbucket Repo)

<https://bitbucket.org/RehabMan/>

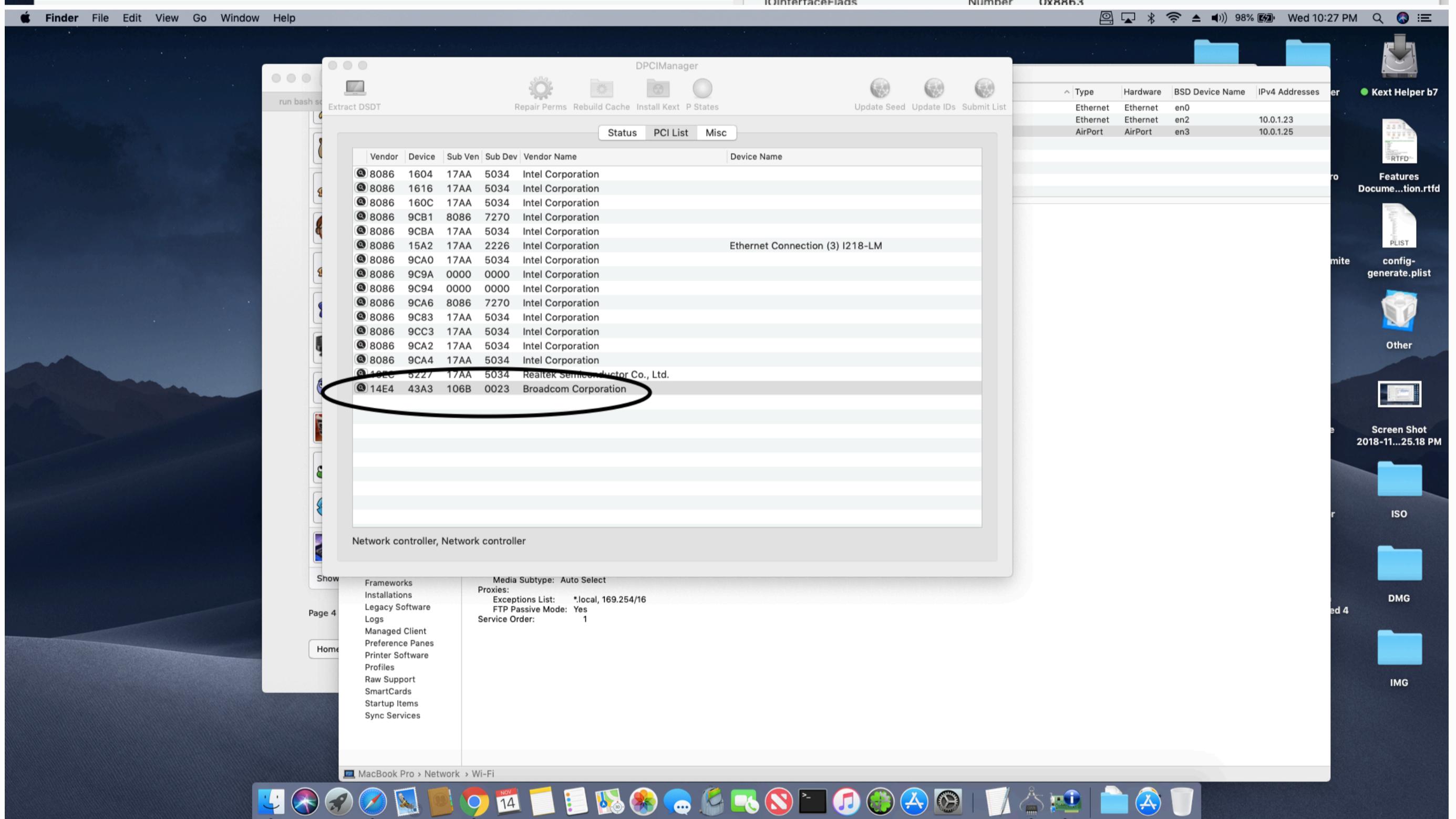


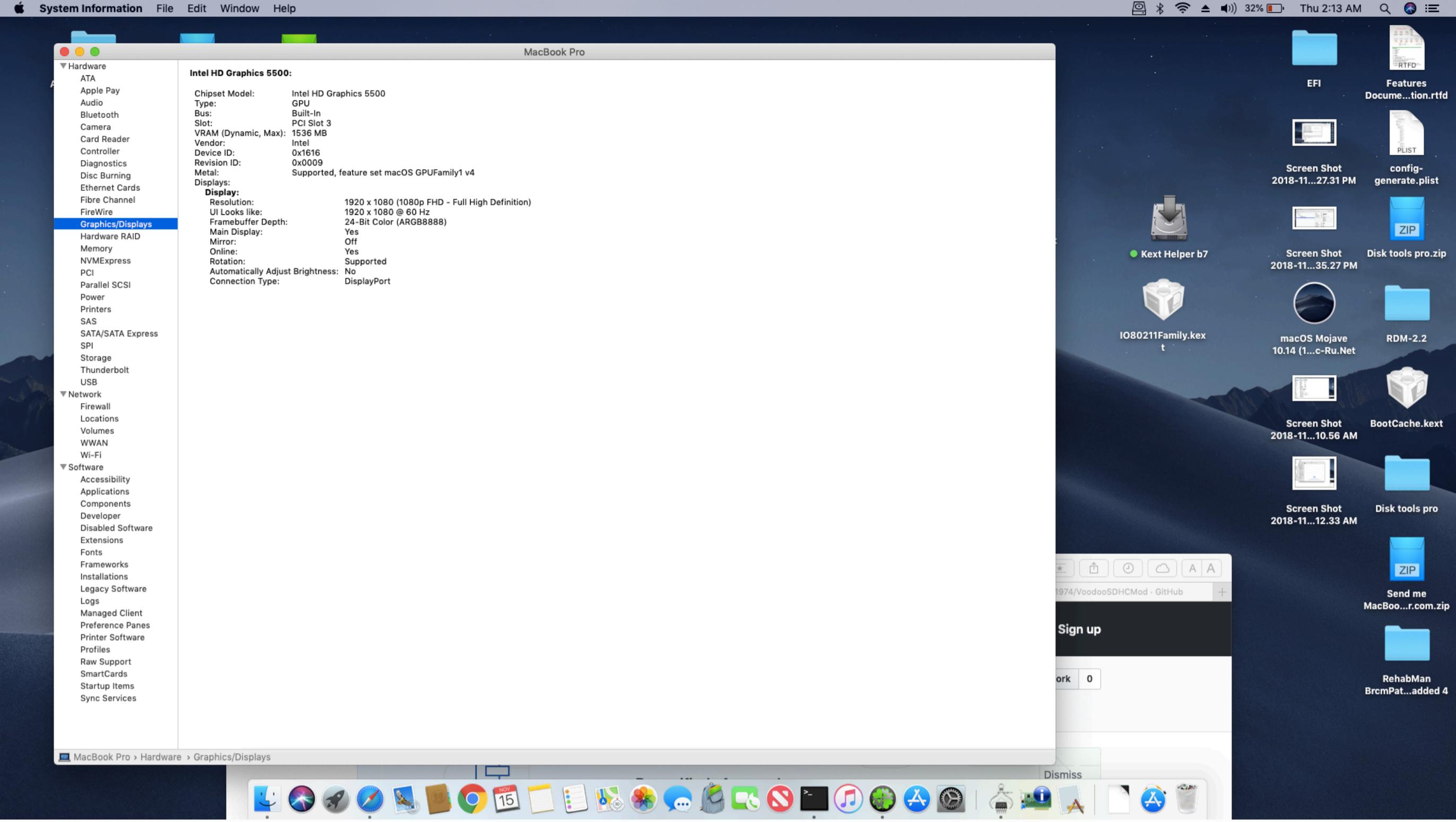
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Class Inheritance: Airport_Brcm4360_Interface : IO80211Interface : IOEthernetInterface : INetworkInterface : IOService : IORegistryEntry : OSObject	
Bundle Identifier: com.apple.driver.AirPort.Brcm4360	

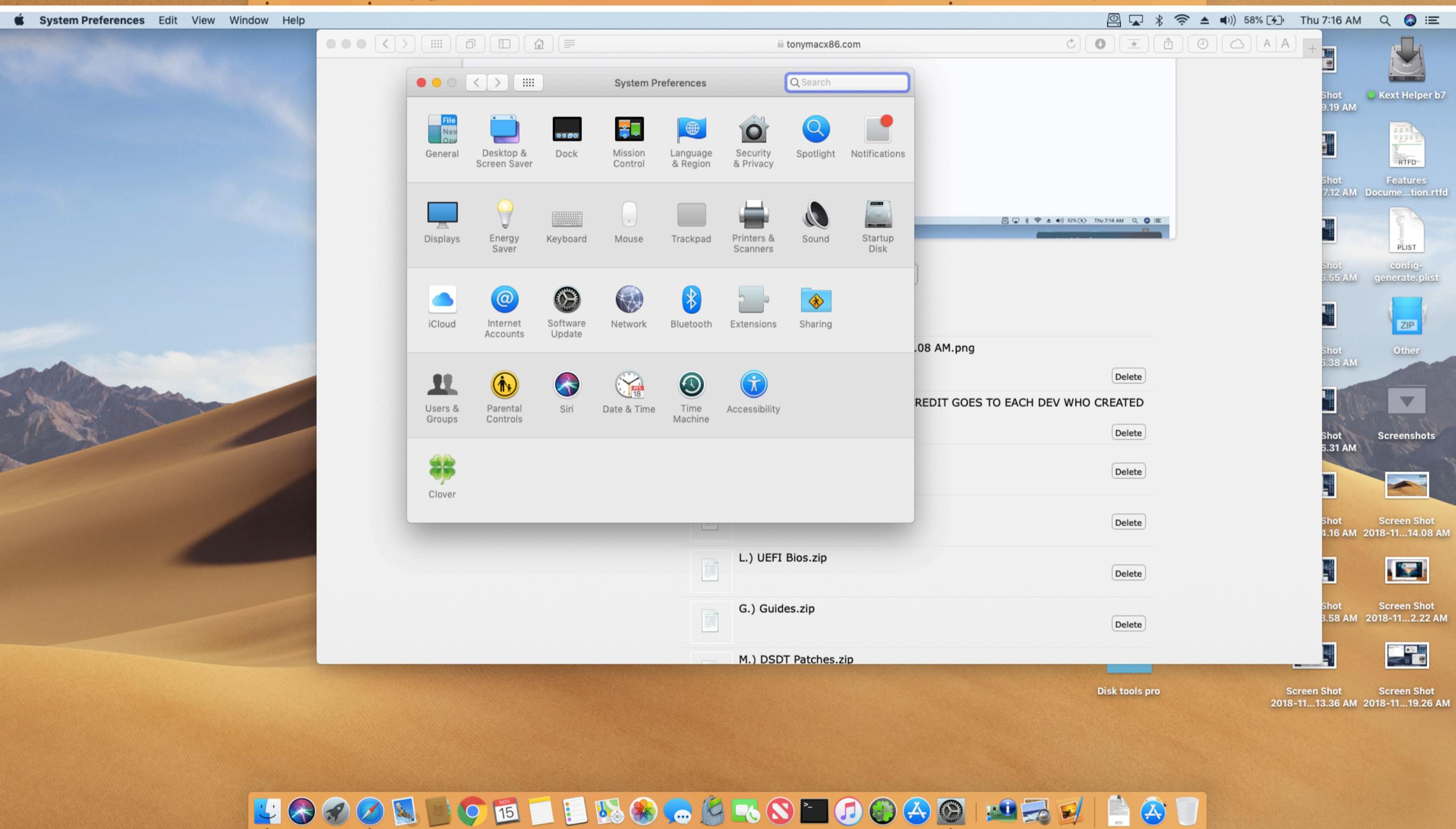
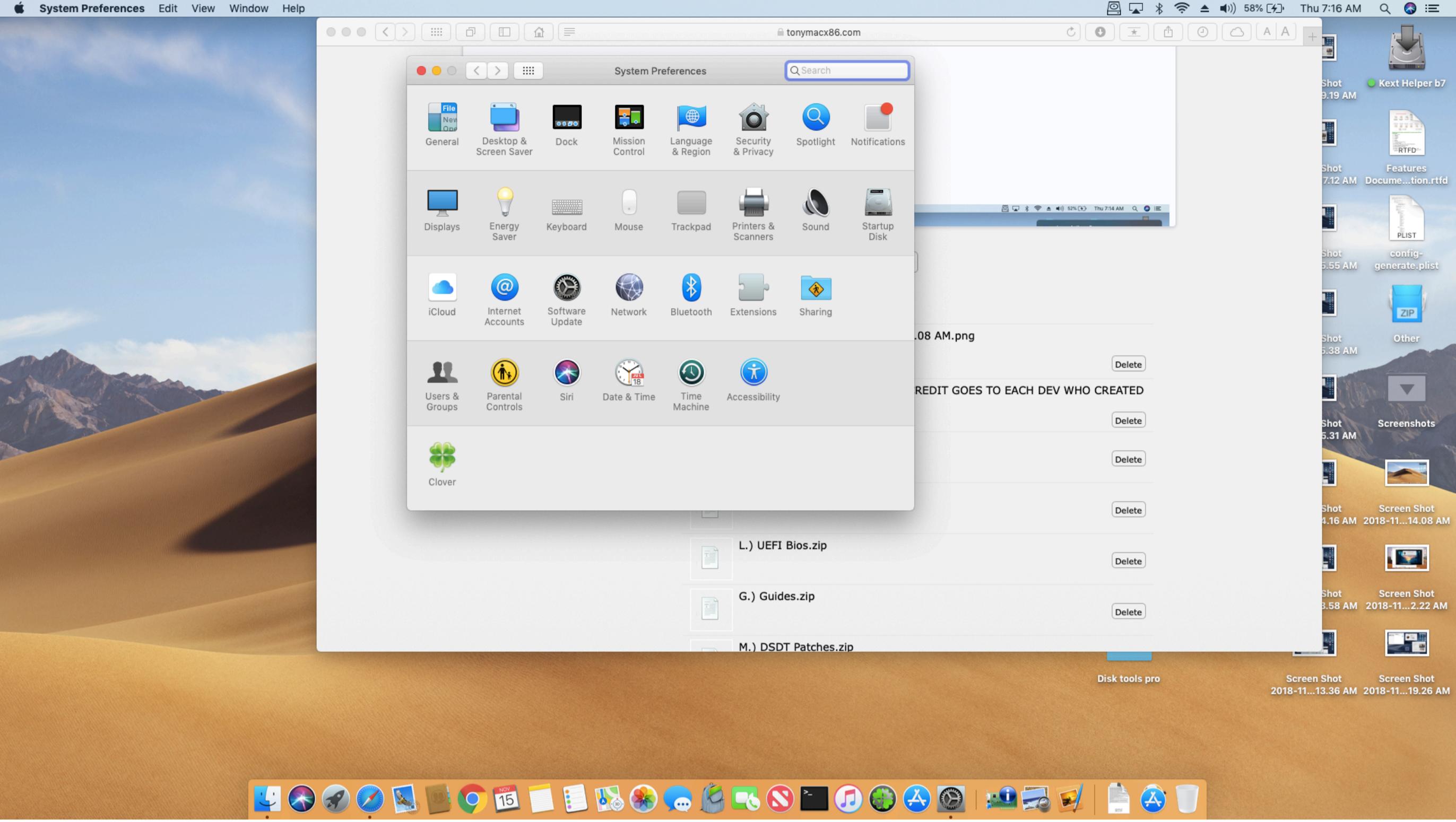
▼ Root

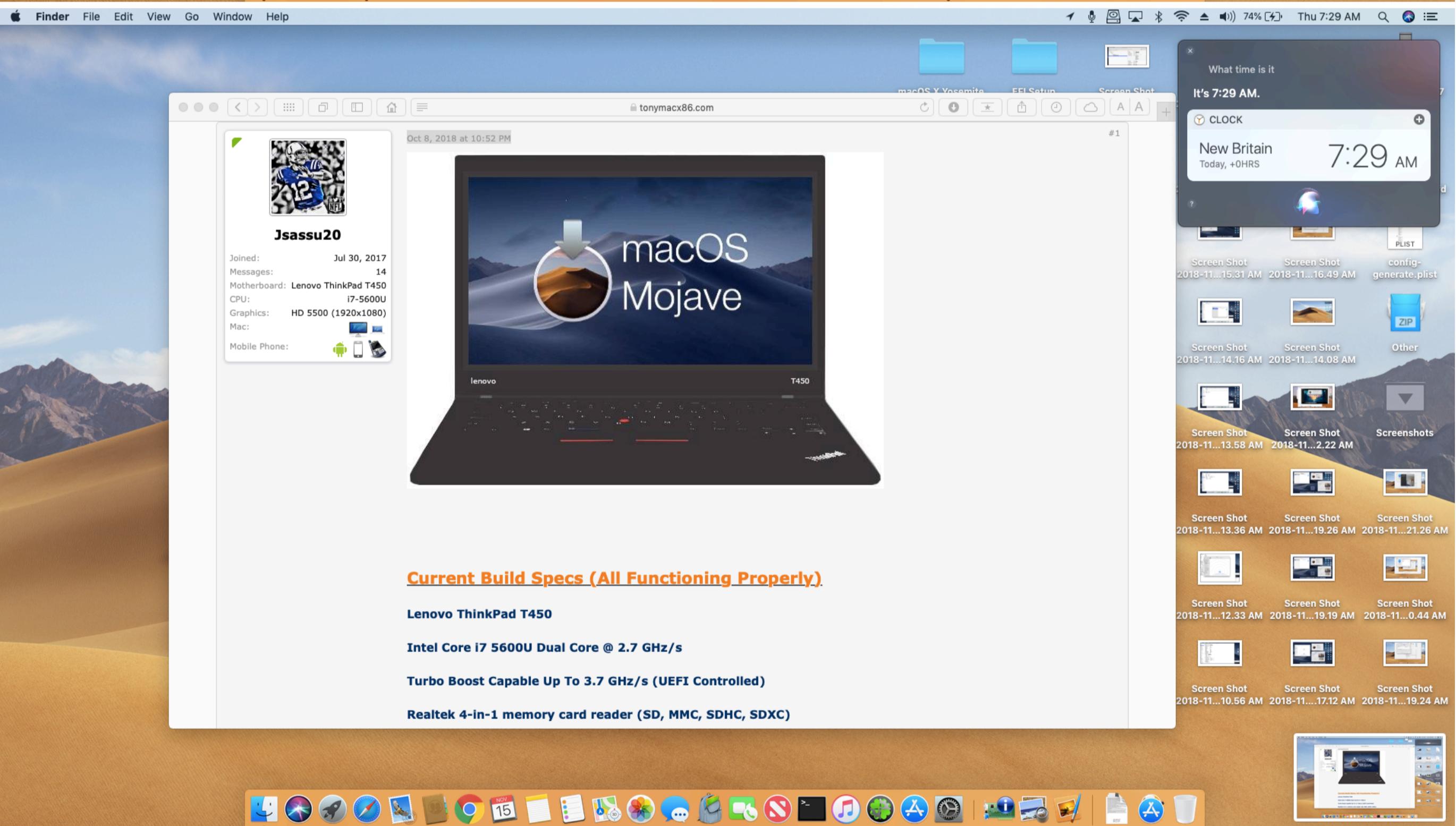
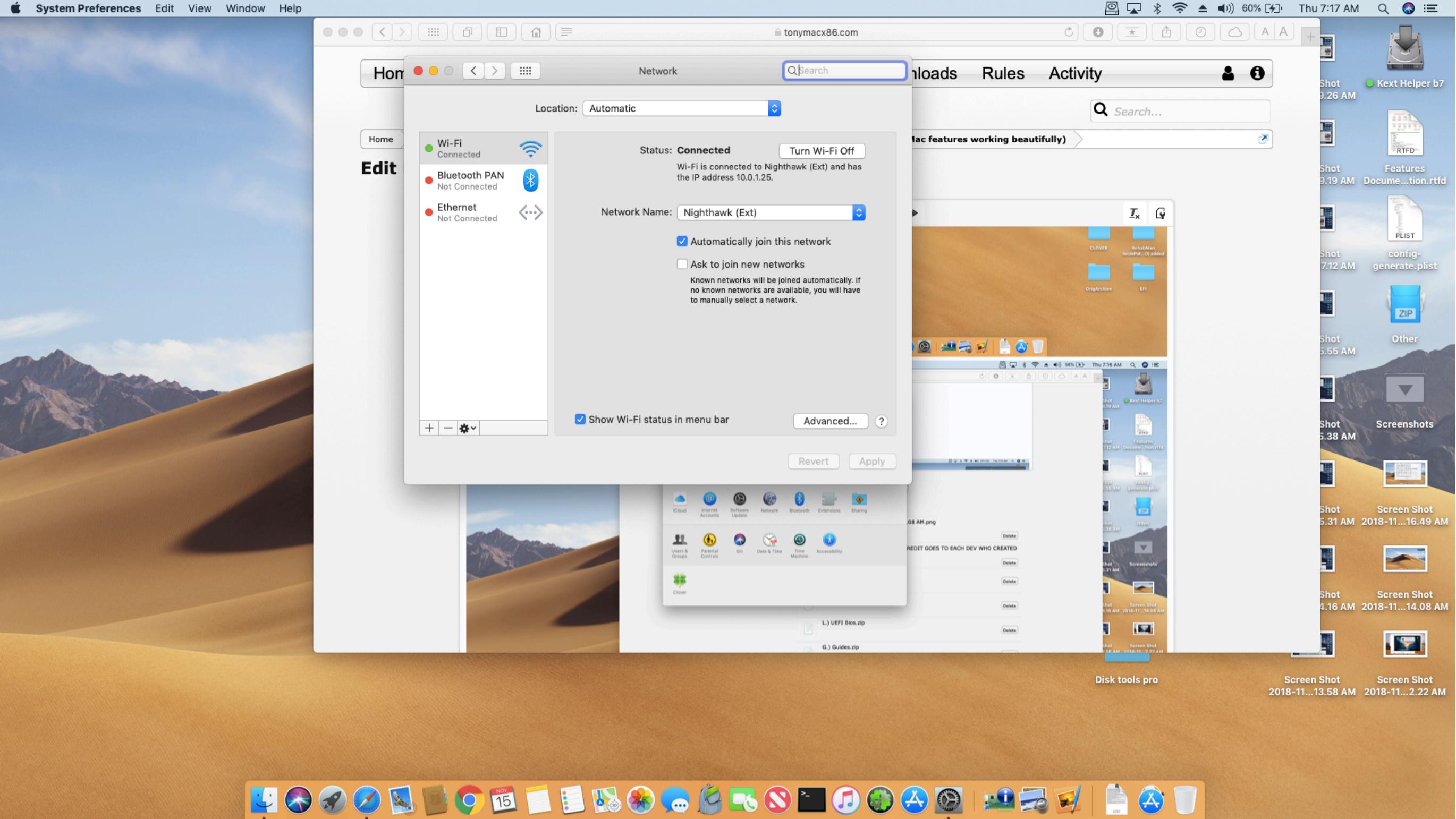
- └ MacBookPro12,1
 - └ AppleACPIPlatformExpert
 - └ PCI0@0
 - └ AppleACPIPCI
 - └ EXP2@1C,1
 - └ IOPP
 - └ pci14e4,43a3@0
 - └ AirPort_Brcm4360
 - └ AirPort_Brcm4360_P2PInterface
 - └ AirPort_Brcm4360_P2PInterface
 - en3

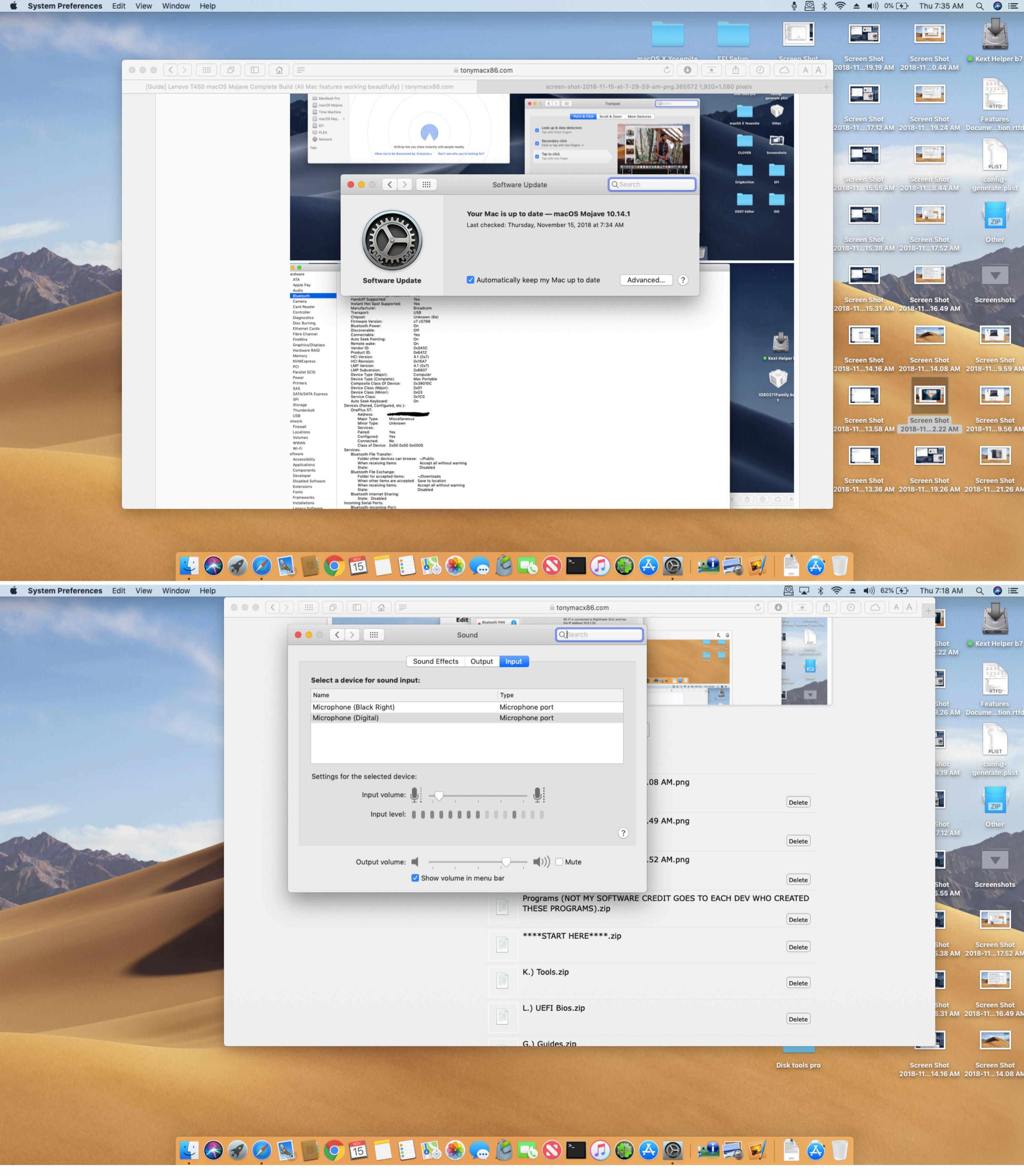
Property	Type	Value
BSD Name	String	en3
IO80211Band	String	5 GHz
IO80211BSSID	Data	[REDACTED]
IO80211Channel	Number	0x3c
IO80211ChannelBandwidth	Number	0x28
IO80211ChannelFrequency	Number	0x14be
IO80211CountryCode	String	US
IO80211DriverVersion	String	Broadcom BCM43xx 1.0 (7.15.166.24.3)
IO80211ExtensionChannel	Number	0x40
IO80211HardwareVersion	String	vendorid: 0x14e4 deviceid: 0x43a3 radiorev: 0xd2069 chipnum: 0x4350 chirev: 0x8 corerev: 0x30 boardid: 0x23 boardvendor: 0x1028 boardrev: 0x1220 driverrev: 0x70fa618 ucoderev: 0x0 bus: 0x1
IO80211Locale	String	FCC
IO80211RSNDone	Boolean	True
IO80211SSID	String	[REDACTED]
▼ IOActivePacketFilters	Dictionary	2 values
IOEthernetWakeOnLANFilterG...	Number	0x0
IONetworkFilterGroup	Number	0x13
IOBuiltIn	Boolean	False
IOControllerEnabled	Boolean	True
IOInterfaceExtraFlags	Number	0x412008c0
IOInterfaceFlags	Number	0x8863

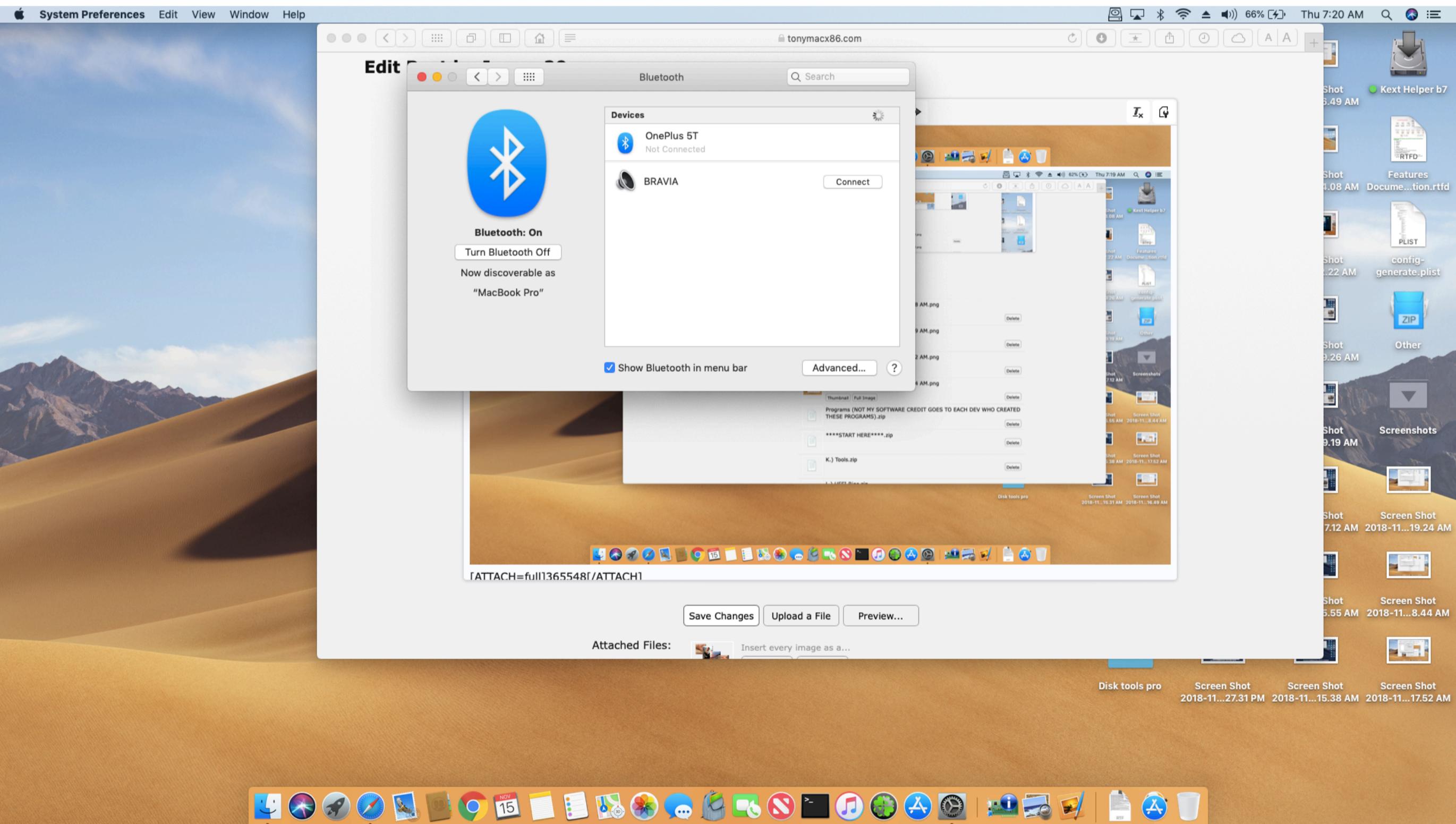
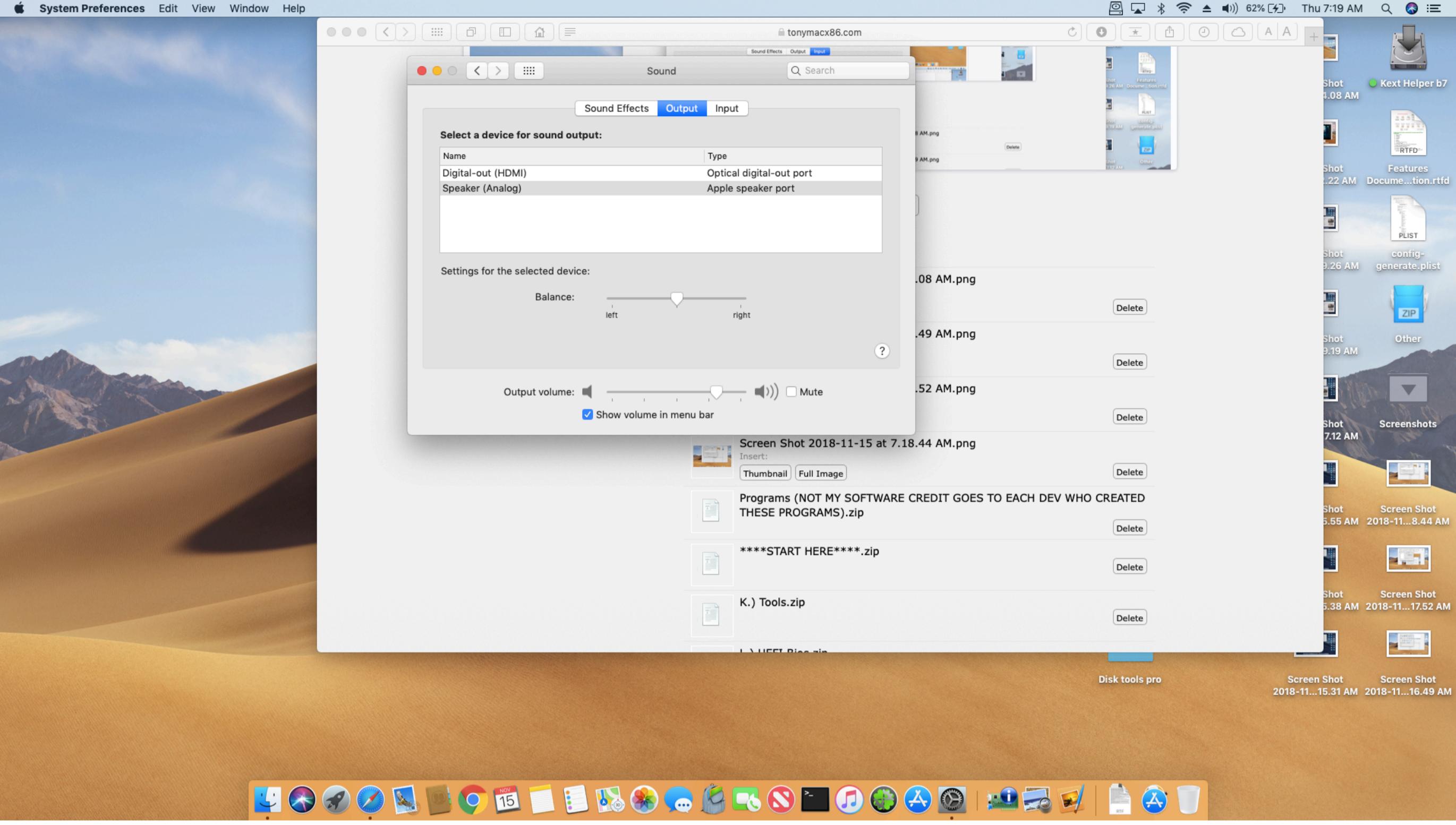


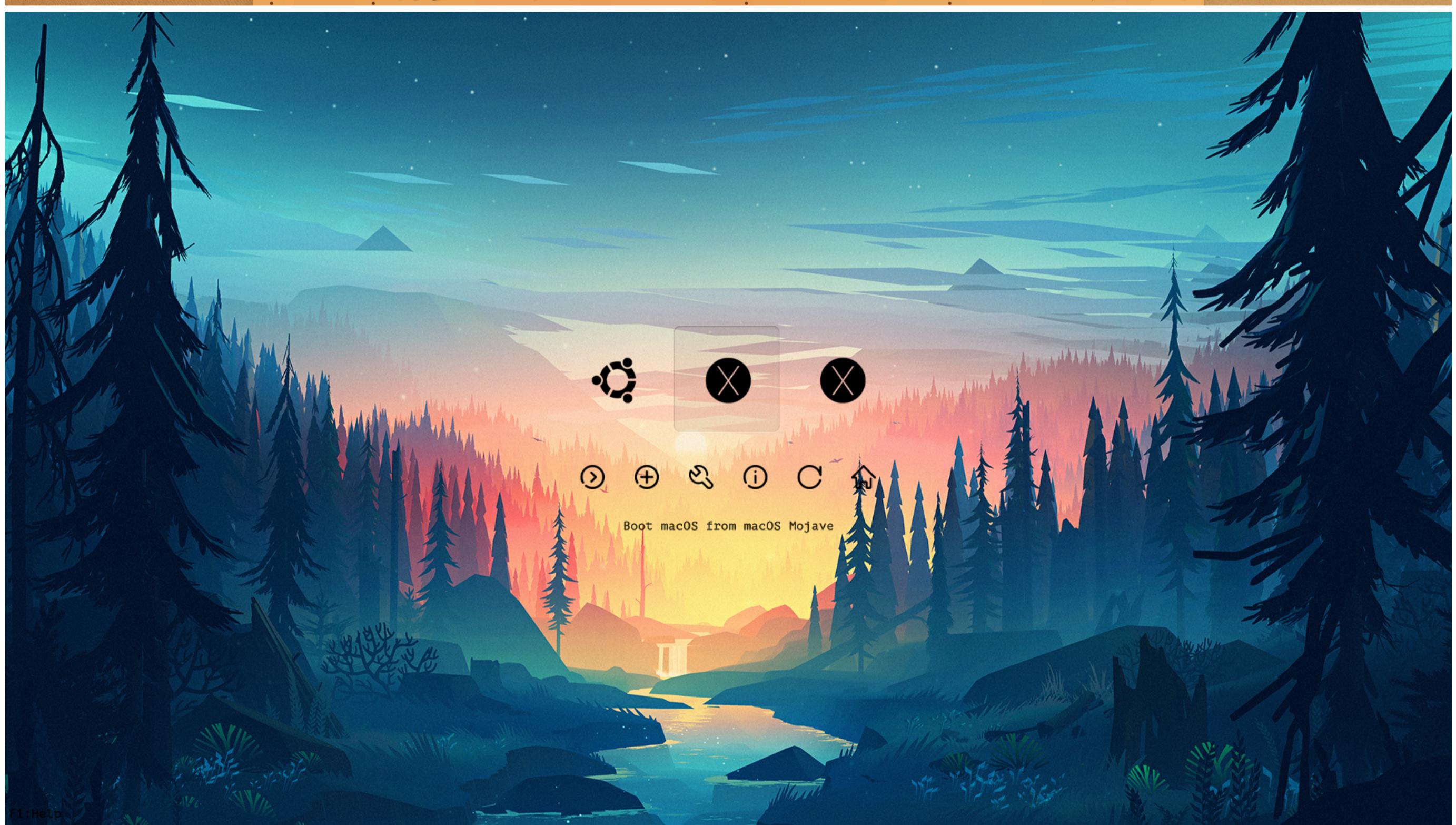
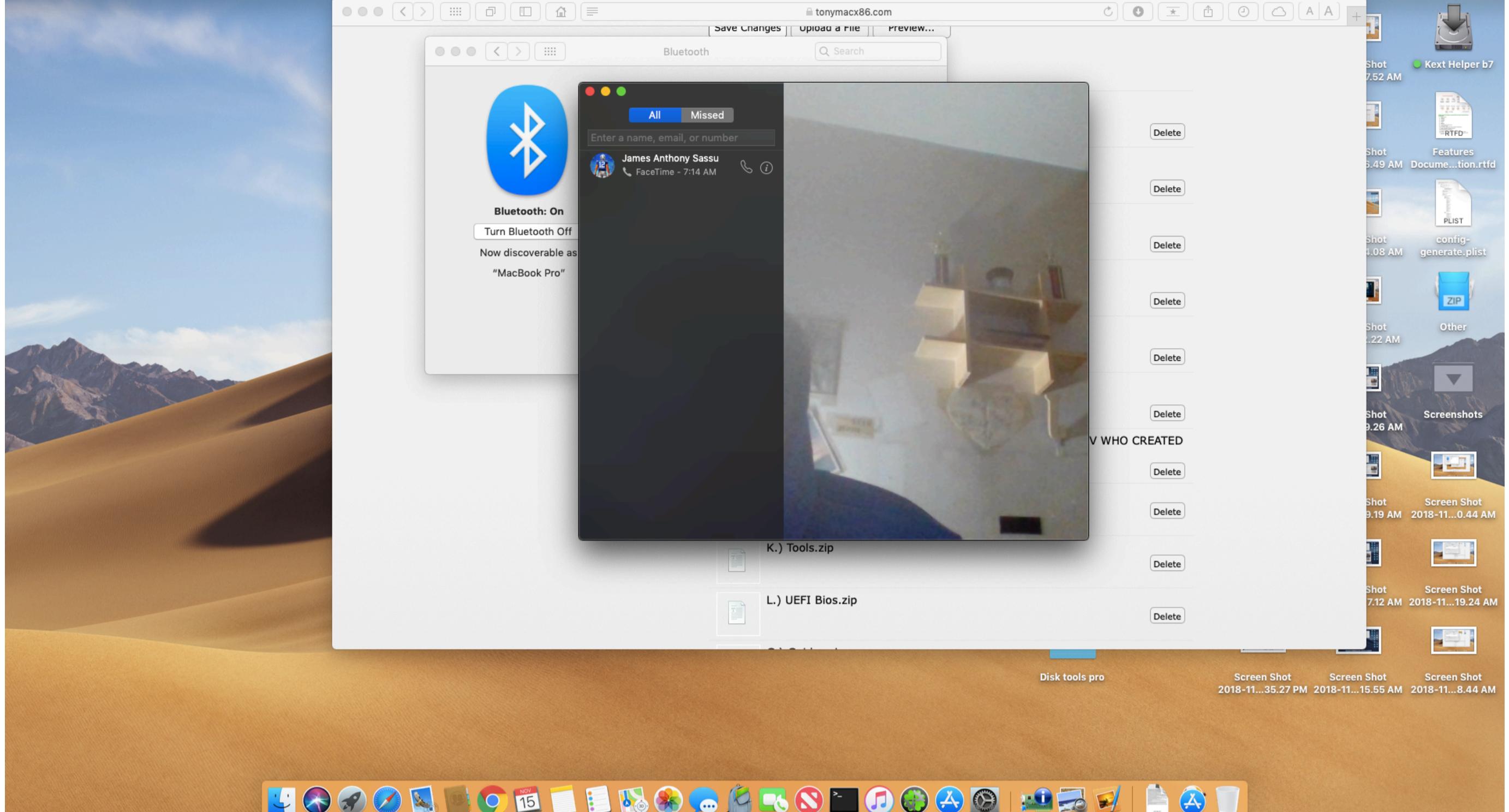












samiewami04 and I.Ahmd like this.

Last edited: Yesterday at 8:04 PM

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Oct 9, 2018 at 10:16 AM



RehabMan

Moderator

Jsassu20 said: [↑](#)

I had the DVMT reading as 128mb from Windows

Read:

RehabMan said: [↑](#)

IMPORTANT!: Contrary to many of the guides you will read, Windows is NOT a valid way to determine what DVMT-prealloc is set to. There is no correlation, especially with Windows 10.

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Oct 14, 2018 at 1:07 PM



kamizz

I'm very very interested on this. Because is my first steps on Hackintosh and my machine very closely match yours .

Attached Files:



(1.9 MB, 56 views)

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Oct 14, 2018 at 2:22 PM



RehabMan

Moderator

kamizz said: [↑](#)

I'm very very interested on this. Because is my first steps on Hackintosh and my machine very closely match yours .

Follow the Clover guide linked from the FAQ.

<http://www.tonymacx86.com/el-capita...faq-read-first-laptop-frequent-questions.html>

Although you should read the FAQ for an overview of issues, the Clover guide is linked from the first question: "**Q. Where do I start?**", just after the bold face "**Clover Guide**".

Here is a direct link, just to be clear:

<https://www.tonymacx86.com/threads/guide-booting-the-os-x-installer-on-laptops-with-clover.148093/>

Also, your profile must be filled out with complete details as requested in the FAQ, again under "**Q. Where do I start?**". All seven details requested are equally important.

And if you have an issue (after following the guide), or on any other problem, you must provide a detailed description of the problem including information that helps us understand what you're doing. Always attach "Problem Reporting" files as per FAQ.

<http://www.tonymacx86.com/el-capita...faq-read-first-laptop-frequent-questions.html>

The required files and data are fully detailed in the last question in the FAQ:

"Q. What are typical "Problem Reporting" files?"

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Jsassu20

kamizz said: ↑

I'm very very interested on this. Because is my first steps on Hackintosh and my machine very closely match yours .

The Links that I've included contain everything necessary to install Mac OS and then get you up and running with most of the really difficult things in the beginning that it took me a while to understand keep in mind that you may still have to do somethings yourself in order to achieve near full functionality. The EFI folder has two folders, one that's marked USB which is for the actual USB drive that you create to install Mac OS on your computer the other (NAMED "INSTALL")folder contains the permanent clover loader along with all the necessary kext files, drivers, the config.plist file from my machine and pretty much everything that you really need to start off with a fully functioning machine for the most part.

All you need to do is just swap off the contents of the EFI folder on the USB with the content of my EFI/USB folder and then when you finish installing Mac and booting to drive successfully you then want to copy the contents of the EFI/INSTALL folder n my Google Drive to the EFI folder in the EFI Volume on your Mac (you'll need to mount it) and then you'll basically have all you need and things should work with the exception of some hardware if its not the same as my hardware. But this is pretty universal and should give you a good head start..

The USB drive should have two partitions, One which is a few hundred MB and the large partition where the macOS install files are. The small partition contains one folder called EFI, this folder should have a folder Named CLOVER in it if you setup the drive correctly. Just delete that clover folder and replace it with mine. Same goes for the main folder. The Mac sees that partition on your main drive where you install Mac as VOLUME named EFI and there is a folder inside that volume named EFI and that's where CLOVER folder goes. Even if no CLOVER folder exists in either the USB or main drive it doesn't matter. It will boot as long as you place the folder in the EFI folder of each drives EFI partition..... so it would look like:

/EFI/EFI/CLOVER (for both the USB and main install HDD or SSD)

Depending on how different your computer is for mine you may have to you may have to pat your own DSDT and SSDT files in order to get things like your brightness controls Power management and any other sensors such is like sleep mode and stuff like that I've included the contents of mine what you may work depending on how close your hardware is to my but don't bet on it. The process is not really hard but it's going to require you to read because I'm not going to be able to give you the proper guide off the top of my head.

1. Make sure your bio settings are in order, disable CompuTrace all security chips network booting turn your video men as hit as you can, disable fingerprint sensor because you won't need it, to play around with a few other settings to get a successful boot if it doesn't work the beginning. Also make sure you enable CSM for UEFI booting because that's what you'll be using this is not a Legacy install.

2. Once you get the USB loaded for install, prepare the drive with disk utility and format it as APFS and then install to that drive. About halfway through the install the computer is going to restart it may even restart twice, that's normal the install did not fail are you need to do is instead of selecting an install Mac OS from install Mac OS you want to select install Mac OS from "whatever you chose the name your drive when you formatted it". If it restarts again do the same thing allowe to continue.

3. Once the install finishes go through the setup process take the contents of the install folder which will be just like you used for the USB installer instead move all those contents to the EFI directory of the Drive that used to install Mac OS on because this will be your permanent clover set up. Once you do that you should then be able to into Clover every time you start up and then go directly to your macOS. There are ways to configure it so that you can start directly in the Mac OS but you'll have to figure that out on your own.

4. There's a 90% chance that you'll need to get a new Wi-Fi adapter whether you choose to get a USB one or swap out the actual internal one is your business but unless you have an atheros wifi card or a Dell computer with one of the supported Wi-Fi cards then there's really nothing you can do but you'll be in the connector wire for Internet for now. If you have an Intel Wi-Fi card it's def not going to work don't even bother trying.

5. If your computer is close enough to mine then there's a chance that everything that's in place will pretty much get you to about 85% of completion without needing to do anything but if my DS DT doesn't work for you're to have to figure out a patch yours. Rehab man is everything you need just search for him and you'll be able to figure it out it's not that hard.

My setup is:

Lenovo ThinkPad T450 (20BV)

Intel Series 9 Chipset with i7 5600U (BROADWELL)

16 GB Crucial DDR3 1600mhz (2x8)

Intel HD 5500 Graphics (Integrated)

1080P FHD IPS LG Display from T450s (Original was 1600x900 TN Display)

Dual battery (Need to disable one in the patch which I've already done and you can try if your hardware is close enough, everything should work automatically)

If your hardware is close enough everything will be in place as long as you put the folders where I told you then you'll know after rebooting whether or not it was a match if your graphics is working properly and your volume along with brightness controls are functioning as well as your power setting being displayed normally.

If your computer works and the audio and everything else is fine but no power or brightness control then you'll need to patch your own DSDT and SSDT and replace the files in the respective folders in your clover directory. There's a few guides I put in that directory as well which may help.

Hopefully this gets you going

<https://drive.google.com/open?id=14N4-3dsBEhpZfS6J3ZGQkEgw4y9VrqSD>

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Oct 18, 2018 at 5:59 AM



utof

Hi Jsassu20 and thanks for this work.

I've got a different laptop from yours but with some similarities. It's a Lenovo Thinkpad Yoga 12 (from 2015 as the T450).

Similarities:

Intel Series 9 Chipset with i5-5200U (BROADWELL)

Intel HD 5500 Graphics (Integrated)

1080P FHD IPS

same Synaptics trackpad

thinkpad keyboard layout + trackpoint

So I've used your USB EFI folder to get my USB installation disk working. Great, it works well on my platform ! 😊 So it's really useful to get started with an installation of Mojave on a 2015 Thinkpad platform (T450, X250, Thinkpad Yoga 12, Thinkpad Yoga 15,...)

But regarding your EFI folder "installed" I've some remarks to make:

- Brightness won't work with IntelBacklight.kext ! I've removed this kext and installed instead AppleBacklightFixup (

<https://www.tonymacx86.com/threads/...ontrol-using-applebacklightfixup-kext.218222/>) and then brightness does work!

- Your VoodooPS2Controller kext is too old (1.8.5), the trackpad prefpane does not come up in preferences. With a more recent version (1.9.2) RehabMan-Voodoo-2018-1008 from <https://bitbucket.org/RehabMan/os-x-voodoo-ps2-controller/downloads/> it works.

- lots of patches in config.plist are redundant with what Whatevergreen does. Just watch your preboot log with "sudo bdmesg" and you'll see so many "bin not found / already patched!". By disabling all these patches in config.plist everything works regarding display, and I was even surprised to get not only HDMI port working but also the Display Port from the Onelink Pro Dock (<http://support.lenovo.com/us/en/solutions/pd029981>) working out of the box without any tuning/hacking.

- I think there is also some other cleaning to do in your EFI folder and config.plist, like AppleNForceATA.kext (there is no NForce sata chipset on Thinkpads), SuperVIAATA.kext (there is no VIA chipset on Thinkpads), ApplePCIIDE.kext, ATAPortInjector.kext and maybe some other kexts.

So I won't use it "as-is" for my laptop, but however yeah I'm very pleased to get battery working out-of-the-box.

Last edited: Oct 18, 2018

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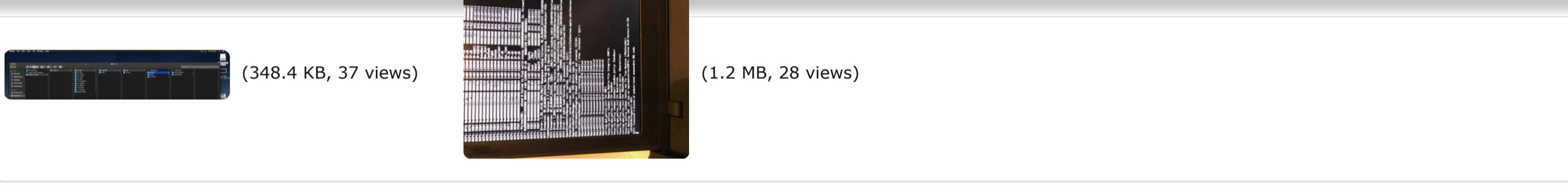
Oct 18, 2018 at 5:28 PM



kamizz

Hi guys thank you for support it's really wonderful and professional forum. Got some few probably noob questions. Jsassu20 I overwritten my EFI folder with yours from installed folder after that cannot boot from my SSD, any hints where to start looking. Please see pictures attached.

Attached Files:



Last edited: Oct 18, 2018

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Oct 18, 2018 at 5:56 PM



RehabMan

Moderator

kamizz said: [↑](#)

Hi guys thank you for support it's really wonderful and professional forum. Got some few probably noob questions. Jsassu20 I overwritten my EFI folder with yours from installed folder after that cannot boot from my SSD, any hints where to start looking. Please see pictures attached.

"Problem Reporting" files are incomplete.

Read FAQ, "Problem Reporting" again. Carefully. Attach all requested files/output.

<https://www.tonymacx86.com/threads/faq-read-first-laptop-frequent-questions.164990/>

Use the gen_debug.sh tool mentioned in the FAQ, that way it is less likely you'll omit something.

Keep in mind using patched ACPI from a different computer is a bad idea...

Last edited: Oct 18, 2018

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Oct 18, 2018 at 6:51 PM



utof

kamizz said: [↑](#)

Hi guys thank you for support it's really wonderful and professional forum. Got some few probably noob questions. Jsassu20 I overwritten my EFI folder with yours from installed folder after that cannot boot from my SSD, any hints where to start looking. Please see pictures attached.

I would advise you to remove files from /EFI/CLOVER/ACPI/patched/ and /EFI/CLOVER/ACPI/origin/ and check how it boots or not...

[Like](#) [+ Quote](#) [Reply](#)

**Jsassu20****utof said:** ↑

Hi Jsassu20 and thanks for this work.

I've got a different laptop from yours but with some similarities. It's a Lenovo Thinkpad Yoga 12 (from 2015 as the T450).

[Similarities...](#)

[Click to expand...](#)

Thank you for letting me know, I've updated the folders with the suggestions you made and included a few other tweaks I've learned over the past few days. I found a really good touchpad driver with tons of gesture capability. It's called ApplePS2SmartTouchPad.kext or something to that effect. There is a whole set of directions present within the kexts resource folder when you inspects the package contents. Theres also a website that Im going to add into the guides folder on my Google Drive. Whats your gmail address? I'll give you permission to edit the folders so that way we can get this thread as organized as possible.I just started messing around with this hobby. I've been into hacking and modding for 20 years now but this whole topic is very new to me so I'm still figuring it out but I really appreciate you letting me know that stuff because it allowed me to figure out another area I wasn't too clear on.

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