

printout

Keystone MacCentral Macintosh Users Group ❖ www.keystonemac.com

Keystone MacCentral January 21st Meeting

Please see your membership email for the links to this month's Zoom meeting or email us at KeystoneMacCentral@mac.com.

During our program this month we plan to discuss

❖ Shortcuts

- ❖> Creating Direct Links
To Your iPhone Settings
- ❖> Save Time! How To Get Started
With Apple Shortcuts
- ❖> What are Shortcuts and how to
Build Them - Shortcuts 101

We have virtual meetings via Zoom on the third Tuesday of each month:

Emails will be sent out prior to each meeting. Follow the directions/invitation each month on our email – that is, just click on the link to join our meeting.

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Keystone MacCentral is a not-for-profit group of Macintosh enthusiasts who generally meet the third Tuesday of every month to exchange information, participate in question-and-answer sessions, view product demonstrations, and obtain resource materials that will help them get the most out of their computer

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When Are Summaries Valuable?

Apple Intelligence has introduced uncertainty into formerly verbatim news article notifications, sometimes producing [blatantly erroneous summaries](#). The company's response to a formal complaint from the BBC and widespread negative media coverage? It will update the feature to perform better. [Jason Snell of Six Colors thinks that's insufficient](#). As it stands, apps can't opt out of having their notifications summarized by Apple Intelligence; Jason is calling on Apple to allow individual apps or similar classes of apps to opt out of notification summarizations. I'm with him on this topic—it's problematic for Apple to put words in the mouths of others. [The Verge's collection of notification summarization mistakes](#) is reminiscent of [auto-correct fails](#), but at least with those, the user can revert to their original text. With news notifications, Apple Intelligence summarizes a collection of unrelated content, often providing actively unhelpful results.

These AI summarization mishaps prompted me to think about summaries in general. I'll admit to a knee-jerk negative reaction whenever I have been offered an option to summarize, whether AI-generated or not. As a fast reader, I was never intimidated by long books in school, and I picked up on my teachers' disdain for CliffsNotes summaries of classic works of literature.

Upon reflection, though, my reaction is unfair. While summarization certainly has its problems, dismissing it overlooks something fundamental: summarization isn't just an overhyped AI feature—it's core to the human experience.

Think of summarization as a form of lossy compression, similar to how digital photos are compressed to save space. Both attempt to reduce the amount of data required from the original to convey its meaning. Damage is always done in the process—a JPEG-compressed image loses fine details from the original, and text summaries lose detail and nuance. Romeo and Juliet is more than a tragedy about two young lovers whose devotion to each other defies their families' bitter feud and

ultimately ends in their untimely deaths. Thanks, ChatGPT, for getting it right.

We accept the loss of detail because one or more constraints often make summaries more practical or useful for specific purposes. The most common constraint is time—you can read that one-sentence summary of Romeo and Juliet in a few seconds, but watching the play or reading the text would take several hours.

Another constraint is background. Without a solid grounding in physics, you may not get much from reading "[On the Electrodynamics of Moving Bodies](#)," the paper in which Albert Einstein introduced his special theory of relativity. Those of us who lack that background or a desire to achieve such a state—life is finite, and we can only learn so much—are better off knowing that the paper demonstrates that the laws of physics are the same for all non-accelerating observers and establishes the relationship between space and time, fundamentally altering concepts of simultaneity and motion. I hope that's a reasonable one-sentence summary.

Physical display space is a third type of constraint. When you look at the list of messages in Mail, that's a form of summary—reading your email as a single scrolling document would be insane. One of Apple Intelligence's features enhances the message list to replace snippets from the first few lines of an email message with a summary. These summaries will be more descriptive than the snippet preview, as the preview is just the first part of a message instead of its meat. However, they can suffer from the same sort of errors as the news notifications.

The value of a summary is, within limits, inversely proportional to the difference in length between the source and the summary. The more compressed the summary, the better—again, within limits.

Those limits vary by situation—I needed a single sentence for the examples above, but such short summaries lose so much of the originals that they aren't otherwise all that useful. Asking ChatGPT for longer summaries provides significantly richer results. In other words, there's always a sweet spot

between how tightly the summary compresses the original and how much of the original's information is retained.

That value explains my discomfort with Apple Intelligence's summarization options. Because I read quickly, I see no reason to ask Apple Intelligence to generate a summary of a Web page or a conversation in Mail. The downside of losing detail and nuance—and of possible errors—outweighs the upside of saving a few minutes of reading time. Notification summaries are even worse; for me, they save seconds at most and often introduce confusion by summarizing unrelated news articles or information that has changed multiple times within the summary period. The main utility I see for notification summaries is to reduce the irritation of too many notifications from chatty conversations or overactive apps, but Apple has already addressed that by grouping notifications.

While AI-generated summaries raise valid concerns, it's essential to recognize that human-created summaries permeate nearly everything we read. For instance, every email message and discussion forum post has a subject line that's supposed to summarize the message's intent. People often write poor subject lines, but they remain an essential form of summary—one that AI could actually help improve.

That's just the start. Nearly every article or non-fiction book has a title that is, most of the time, the shortest possible summary the author or editor can think of that is both attractive to a potential reader and accurate to its contents. Many articles, including ours, have short summaries that serve as teasers in a list. All academic papers have built-in summaries in the form of abstracts—I rely heavily on those when researching topics outside my sphere of expertise.

The need to summarize goes even deeper. Most news articles are themselves summaries of the events they cover. Wikipedia may contain [6.9 million articles](#), but the average length of an article is a mere 690 words—it's a collection of summaries. While few people would consider a book to be a summary, most non-fiction titles are distillations of the author's more extensive research.

I would even argue that human language is itself a form of summary. There's a reason we say that we "choose our words"—we're summarizing the rich, complex, and chaotic thoughts and feelings in our minds into a limited but hopefully understandable collection of words. Just as summaries lose nuance and detail, language often

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I would even argue that human language is itself a form of summary. There's a reason we say that we "choose our words"—we're summarizing the rich, complex, and chaotic thoughts and feelings in our minds into a limited but hopefully understandable collection of words. Just as summaries lose nuance and detail, language often falls short of conveying precisely what we're thinking. Without full-bandwidth telepathy, it's the best we have for sharing ideas. Summaries are intrinsic to human expression.

To summarize—I had to!—summaries offer a different value proposition for everyone. Reading speed, language fluency, topical understanding, space, and other factors play into how valuable a summary of a particular length will be in any given situation. You should ask for AI-generated summaries only when they will provide actual value and you can verify their accuracy when it matters. Finally, remember that just because something can be summarized doesn't mean it should be. 🗑️

By Adam Engst

It's Time to Move On from Bootable Backups

The latest installment in the story of how bootable Mac backups will eventually disappear started with a [blog post](#) by Shirt Pocket Software's Dave Nanian. In it, he explained why SuperDuper could no longer make bootable duplicates on M-series Macs running under macOS 15.2 Sequoia, blaming Apple's asr (Apple Software Restore) utility. This tool is the only way to create a bootable backup.

I read Nanian's blog post shortly before publishing the final TidBITS email issue of the year, so I only had time to write a short warning ("[macOS 15.2 Sequoia Breaks Bootable Backups in SuperDuper](#)," 16 December 2024) and add a proviso to my suggestion in another article ("[OS X.2 Updates Boost Apple Intelligence and More](#)," 11 December 2024) that now was a good time to upgrade to Sequoia:

Until Apple fixes the bug or we learn more about what's going on, anyone relying on a bootable backup—as opposed to a data-only backup—should hold off updating or upgrading.

Such is the problem with deadlines. I was curious if the problem with asr affected other

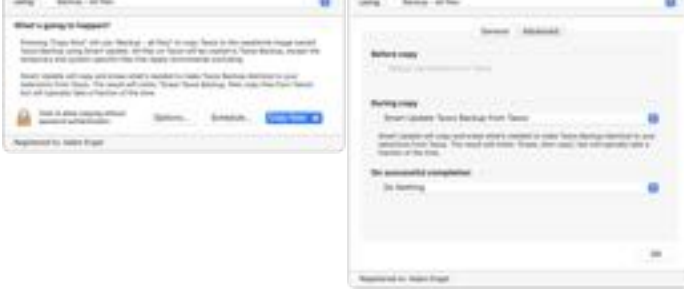
backup apps like Carbon Copy Cloner and ChronoSync, but no information was available at that point. However, now that the necessary details have emerged, I have updated my recommendation on updating and upgrading.

Tests Confirm Problems on M-Series Macs

First, I confirmed that the problem was real but limited to M-series Macs. On my Intel-based 27-inch iMac, [SuperDuper](#) had no problem completing a backup, and I was easily able to boot my iMac from that backup. However, when I tried the same backup on my M1 MacBook Air, SuperDuper failed quickly with the Resource Busy error that Dave Nanian mentioned.



I also verified that changing SuperDuper's settings to use the standard "Backup – all files" script with the Smart Update copying option successfully created a data-only backup of the M1 MacBook Air.



Next up, I tried [ChronoSync](#). It wasn't encouraging to start, with its assistant warning me, "Note: Bootable Backups have been losing relevance on recent versions of Apple hardware and will eventually not be supported. You should consider creating a Data Volume Backup instead." The app's developers weren't being alarmist. Two attempts to make a bootable backup failed, and Econ Technologies confirmed that the reason was the asr bug.



[Carbon Copy Cloner](#)'s in-app text was similarly down on bootable backups, noting, "Creating a bootable copy of the source OS requires an Apple-proprietary procedure. CCC provides this functionality in a 'best effort' manner. Please click the '?' button to the right to learn about the caveats associated with this procedure." CCC also failed twice, though again, I don't definitively know why. The destination SSD has worked fine in the past, and SuperDuper's data-only backup to it completed with no errors, so I don't believe it's a hardware problem.



Regardless of whether asr caused these problems, such uncertainty is problematic when it comes to backups. I feel terrible for Shirt Pocket Software, Econ Technologies, and Bombich Software because they're trying to provide a longstanding feature that users want—bootable backups—and they're entirely at the mercy of Apple's asr tool to do so. Unfortunately, Apple isn't equally as invested in bootable backups.

Varying Opinions on Bootable Backups

Shortly after I completed my testing, Mike Bombich posted a blog entry that [shared information from a 2020 call with Apple](#). (He had missed the start of the kerfuffle, being away to help a family member when macOS 15.2 shipped.) As he outlines in the post, Apple made it clear that it was willing to address problems associated with making backups "as long as it did not require making a compromise to platform security."

From Apple's perspective, allowing system files to be copied inherently introduces opportunities for attackers to modify system components. Since macOS 10.15 Catalina, the separate system volume is immutable, locked, and validated using cryptography—what Apple calls the "[signed system volume](#)." Any method that allows it to be copied onto a bootable drive

must preserve the same verification to ensure nothing has changed.

To mitigate this move away from easily making bootable backups, Apple has invested a lot of effort into macOS Recovery and Migration Assistant. It is now trivial and streamlined to boot a Mac into macOS Recovery, install macOS, and restore user files using Migration Assistant. With a separate system volume, a reinstallation just creates a new, secured, immutable volume and then copies your user files to the data volume. Because Apple controls every part of that process, there's no worry about the security of the system being compromised.

The other aspect of this topic is the value of an external boot drive to an M-series Mac. While Macs with Apple silicon allow booting from external drives, they remain dependent on their internal storage during that process, as Glenn Fleishman wrote in "[An M1 Mac Can't Boot from an External Drive If Its Internal Drive Is Dead](#)," 27 May 2021.

The fresh information here is that an M1-based Mac relies on its internal SSD to allow external drives to boot. If the internal SSD has failed or been entirely erased—it contains several hidden volumes—you can no longer boot from an otherwise valid volume on an external drive. Why would Apple do this? To increase security.

Mike Bombich closes his post by explaining that Carbon Copy Cloner will continue to support the Legacy Bootable Copy Assistant because it remains useful for Intel-based Macs. But he stresses that no one should base their backup strategy on bootable backups. While Apple is likely to fix the current asr bug, the writing is on the wall, with Bombich saying:

Apple made it unambiguously clear that "bootable backups" and System cloning are

fundamentally incompatible with platform security.

ChronoSync developer D. Proni isn't a fan of bootable backups either, telling me via email:

We're at the mercy of the OS ever since we were forced to use ASR. This isn't the first time ASR was broken by an OS update and it certainly won't be the last. Apple doesn't appear to place a high priority on ensuring bootable backups can continue to work for users, and that is one of several reasons that we are trying to steer users away from dependency on bootable backups. In ChronoSync 11, we implemented a Readiness Warning in the Setup panel that questions the wisdom of configuring a bootable backup and tries to steer users to use Data Volume backups instead.

We never really were in love with the concept of a Bootable Backup. While it does allow you to be up and running quickly in the event of a main system volume failure, it also preserves all the 'cruft' that tends to accumulate over time. This includes mis-configurations, unstable extensions, malware and/or corrupt data files that may be the very reason a user might want to start using their bootable backup in the first place. It's conceivable that the user may find themselves in an even worse situation after switching to booting from their bootable backup.

Even before we had to switch to ASR, we tried to encourage running your bootable backup infrequently and, instead, setting up a Home Folder backup targeting your bootable backup volume. This avoids many of the pitfalls associated with bootable backups. Nowadays, running a Data Volume Backup is an even better solution, since it copies ALL user home folders plus any software that is installed. Recovering from disaster via Migration

much more likely to get a user up and running quickly. Plus it's pretty much the only way to configure a new system with your old data, which will likely be your next step if the internal storage of an Apple Silicon Mac suffers a hardware failure.

However, Dave Nanian of Shirt Pocket Software remains staunchly in favor of bootable backups. He pointed out via email that the signed system volume ensures that there's no system-level cruft (there could be low-level cruft, but it would be on the Data volume). In his view, making a bootable backup instead of a data-only backup provides only potential upside by providing both the possibility of bootability and full support for a Migration Assistant-triggered data-only restore.

He's not wrong, but the last time I needed a bootable backup to get back to work, it was unusable (see "[Six Lessons Learned from Dealing with an iMac's Dead SSD](#)," 27 April 2020). The core problem was that it lived on a hard drive rather than an SSD, and hard drives don't provide sufficient performance for booting macOS. If you're going to make a bootable backup, make sure it's on a fast SSD. Even after I started booting from an external SSD, problems remained. macOS may support booting from external drives, but it's an edge case that doesn't receive much testing from Apple or Mac developers.

My Recommended Backup Strategy

I've been preaching the need to move on from bootable backups since early 2021, when I wrote "[The Role of Bootable Duplicates in a Modern Backup Strategy](#)" (23 February 2021). A slightly updated version of the backup strategy I recommended in that article would include:

versioned backups using Time Machine to an external drive, preferably an SSD for [higher performance](#) and lower environmental noise. Versioned backups are essential for recovering from corruption or inadvertent user error by allowing you to restore an earlier version of a file, a deleted file, or the contents of a deleted folder. Other apps can make versioned backups, but Time Machine backups are particularly useful because of how Apple integrates them into macOS. It's a quick process to go back in time and select files, folders, or volumes—though the interface is archaic and awkward—and Time Machine snapshots are the basis of migrations and system restores. Time Machine is far from perfect, but it has insider access to technical and security changes in macOS and generally works acceptably.

- **Internet or offsite backup:** Local backups are worthless if all your equipment is stolen or damaged by fire or water. Historically, the recommendation was to rotate backup drives offsite, but in the modern world, an encrypted Internet backup service like [Backblaze](#) is much easier.
- **Nightly duplicate:** Duplicates are still a worthwhile part of any backup strategy, whether or not they're bootable. Duplicating your data every night adds diversity by relying on different software if Time Machine falls prey to bugs, putting a backup on another external drive (don't configure Time Machine and your duplicate to share a drive), and eliminating the need for special software to restore data. Plus, if you have to switch to another Mac, a duplicate would quickly let you get back to work on your files. Once Apple fixes the asr bug, there's little downside in making the duplicate bootable, but it's far from necessary.

• **Cloud-based access to key data:** Cloud storage is a weak form of backup, and it's not a required part of a backup strategy because some people can't or don't wish to store data in the cloud. But, for many, cloud storage is an excellent way to access essential data from any device or location—and it may offer you a last-ditch way to retrieve lost files. For instance, \$9.99 per month gets you 2 TB of iCloud Drive storage, and Apple's [Desktop & Documents Folders syncing feature](#) could make it particularly easy to get back to work on another Mac. A similar amount of money would provide 1 or 2 TB of storage on [Dropbox](#), [Google Drive](#), or [Microsoft OneDrive](#).

• **Backup Mac or another device:** Given how hard it is for anyone but Apple to repair Macs, if you can't afford days of downtime, think about what device you could use for your

work if your Mac were to fail and how you'd get your data to it. It might be a laptop you mainly use when traveling, your previous desktop Mac, or even an iPad. Just be sure to take your backup device out for a test run before you need it.

I realize that most people won't have all five of these, so if you have to choose, I recommend Time Machine paired with Backblaze to protect against disasters that would affect your Mac and Time Machine drive. But whatever you do, please make backups. Losing data is a matter of when, not if. (Tell us what your backup strategy involves in "[Do You Use It? What's Your Backup Strategy](#)," 6 January 2025.)

Finally, let's return to the question of updating or upgrading to macOS 15.2 Sequoia. Assuming you're willing to change any bootable backups to data-only backups, I think



By Adam Engst

Enhance Your Images with Apple's Clean Up Tool in Photos

To my mind, Clean Up is the most impressive Apple Intelligence tool we have now. Introduced in Photos in macOS 15.1 Sequoia, iOS 18.1, and iPadOS 18.1, Clean Up enables you to remove distracting people and objects from the background of photos, replacing them with AI-generated scenery. After you invoke it with the Clean Up button while editing a photo, Clean Up might automatically highlight items you might want to remove, and you can always scrub over or circle an unwanted one to eliminate it.

Object removal capabilities are widespread in other apps. Since I seldom edit photos, I can't compare how well Clean Up works to other tools. To an extent, that's irrelevant—I would never use Photoshop to edit an image or purchase an app

purely to remove objects, but I will use Photos. I suspect I'm far from alone.

Also, for snapshots or informal sharing, if Clean Up's results aren't perfect, it doesn't matter—nobody will notice. However, if you're making a large print or sharing in a venue where the image will attract scrutiny, you might want to switch to a professional tool like Photoshop or Lightroom, or ask a friend with one of those tools to help.

Nevertheless, my testing of Clean Up has provided a sense of where it works well, where it's unlikely to succeed, and when its results are more variable than you might expect. It can prove valuable when the objects to be removed are small and cleanly silhouetted. However, it may struggle in busy scenes or when the background is difficult to recreate convincingly.

Finally, note that I've chosen to edit the images below with Clean Up to illustrate what it can and cannot do well, not necessarily to improve the images. A few of the changes improve the photos, but others don't.

✔ Cleanly Silhouetted Objects

When it's good, Clean Up is very good. When it's bad, it's laughable. It works best when the people or objects you want to remove are relatively small and cleanly silhouetted against an easily faked background.

In this photo of me at a cross-country race, the pedestrians and car on the stone bridge behind me are easily removed, as is the blue course marking flag on the ground. (Ignore the general blurriness of the photo—it was taken at a distance using the [Camera+](#) Action mode as part of a burst, and I had to crop heavily to make myself the focus of the shot. Apple's ads notwithstanding, even the iPhone 16 Pro is a weak camera for sports photography.)



If you zoom into the right-hand photo and look carefully at where the truck was, you can see that Clean Up didn't do a fabulous job of simulating either the stonework or the leaves. With the stonework, it went a little overboard and replaced pixels that would have been better left alone. In contrast, the leaves are utterly random, but Clean Up introduced an unnatural pattern in the replacement. Regardless, most people wouldn't notice because the edits aren't near the subject of the photo, and the leaves have an unpredictable texture to begin with.

Here's another example where Clean Up performed well. The original was marred by the child's hat in front of me, and the large metal traffic signal poles and wires also distract from the dragon.



Even though the hat is quite large, it's silhouetted cleanly against the uniform road surface, which Clean Up can easily fake. Removing the hat was easy, but selecting the metal poles and wires took more time. Nevertheless, Clean Up removed them without a trace because they were backed by either a tree or the sky. Even the man standing in front of the pole looks as if his face is in shadow, although closer examination shows that Clean Up removed part of his head. Again, for informal sharing, Clean Up's results are entirely acceptable.

✘ Busy Scenes

It can be tempting—even for Clean Up—to remove items in the backgrounds of busy scenes. In my experience with photos like the one below, Clean Up struggles when there are multiple overlapping objects or when the background contains complex patterns or textures that are difficult to recreate convincingly. On the left, Clean Up suggested removing the people under the tent in the background, the car to the left, various shadows, and more—Photos highlights them with a shimmering colorful animation to call out its suggestions.



Clicking each runner or group of runners removed them, with Clean Up filling in an AI-generated background based on the surroundings behind them. For the first two runners on the left, this worked almost flawlessly. However, removing the larger groups to the right resulted in the ugly artifacts in the left screenshot below. The groups are so large that Clean Up doesn't accurately predict what's behind them.

As you can see on the right, when I took all of Clean Up's suggestions, the trees look strange; it added a blur to the right of the silver cup and orange bell, and the area occupied by the car and bystanders on the left of the photo gets weird. Ironically, the main thing I wanted to remove from the photo was my shadow at the bottom; although Clean Up didn't suggest it for removal, it did a good job when I selected it manually.

🤔 Variable Results

Finally, although this image of Tonya finishing a run at one of our Tuesday night workouts doesn't really need much editing, it illustrates an important fact about Clean Up, which is that one removal may affect the next.

For the test, I decided to focus the entire photo on Tonya in the front, removing the other runners, the silver car on the road behind them, the little barbecue grill and picnic table to the left of her head, and the power lines cutting across the top right of the photo.



However, it reveals a subtle but important fact about Clean Up. Individual removals may affect subsequent ones by changing the nearby pixels. In the left screenshot above, I removed each group of runners from left to right, which most people who read in that direction would probably do. When I reversed the direction, removing the runners from right to left, Clean Up did a better job with the smaller groups in the back, creating a more realistic background you can see in the middle screenshot above.

The variability I encountered with the order of removals extends to using Clean Up on other platforms, too. When I edited the photo on my iPhone 16 Pro, Clean Up automatically highlighted the same runners and correctly removed the items I scrubbed over with my finger. Although scrubbing with a finger wasn't as precise as with the Mac's pointer, I could pinch to zoom first to select the smaller objects more accurately.

However, as you can see in the rightmost screenshot above, the background area behind where the runners were is different, and the iPhone version of Clean Up left a more prominent and unsightly artifact than the Mac version. I won't bore you with yet another screenshot, but I was able to use Clean Up once again to remove that artifact.

💡 Clean Up Tips

Here's what I've learned about using Clean Up effectively:

- In general, use Clean Up conservatively. Just because you can remove something from a photo doesn't automatically mean that doing so will make for a better image.
- Choose photos where the people or objects to be removed are relatively small and cleanly silhouetted against an easily faked background.
- When removing multiple overlapping or nearby selections, the order in which you remove them may make a difference. If you're unhappy with the initial result, try removing objects in a different order.
- Make additional passes with manual Clean Up selections to remove previously generated artifacts.
- Within an editing session, you can undo any individual Clean Up action with Command-Z or by tapping the Undo button on an iPhone or iPad. Undo them all with Revert to Original. Command-Z also reverses Revert to Original, so you can check your edits against the original without manually recreating them.
- Results may differ slightly between the Mac and the iPhone. (I presume the iPad's results will be similar to the iPhone's, but I don't have one running iPadOS 18.1 to confirm.) If you care deeply about getting the best results and aren't happy with one platform, try another. Manual selection is the most precise on the Mac, but remember that you can pinch to zoom in on an iPhone or iPad to scrub over small objects more precisely.



I have one final recommendation, which is to compose your photos to avoid extraneous or distracting objects in the background so you don't need to use Clean Up at all. I try to do that when taking photos, so relatively few of mine would benefit from Clean Up, which made it hard to find examples for this article. It's no coincidence that the photos above are all action shots taken in public situations where it was difficult or impossible to control what appeared in the background.

Ultimately, Clean Up works well and may be able to rescue photos that would be great without distracting objects cluttering the background. I encourage you to try it the next time you have a photo that might benefit from some selective removal of objects.

However, as Jeff Carlson showed me after his edit pass, a professional tool like Lightroom may be able to do a significantly better job—I can't see any oddities or artifacts in his version below. Remember that Clean Up as we see it today is Apple's first pass; it's likely to improve in future releases.

