**Read or listen to this article online**

Scan the QR code to open this article on XO.PL

Article source:

**https://xo.pl/it-made-fun-sys-ios-ipados**

OPERATING SYSTEMS

# iOS and iPadOS: a walled garden with Apple guarding the gate

Two new vessels arrived at the Operating Systems Fleet spaceport. The first was so small that the captain of **USS Windows** asked whether it was a ship or a remote control for one. The second had a larger bridge, more working space, and a strong dislike of the word “tablet”. Their hulls bore the names **ISS iOS** and **IPS iPadOS**. Both came from the same Apple shipyard that built **HMS macOS**. The captain of **MSS Android** watched from the next dock. Grzesiu had brought a toolbox and a sandwich. He suspected he would need both. 🚀🤣

## Two ships, one shipyard, very little patience

“IS THAT THE SAME OPERATING SYSTEM?” shouted the captain of USS Windows, pointing at both hulls.

“Not exactly,” replied the captain of ISS iOS. “Our system is designed primarily for iPhones.”

“And ours is iPadOS,” added the captain of IPS iPadOS. “We have more room to work and features adapted to a larger display.”

“SO A SMALL COMPUTER AND A BIG COMPUTER?”

“Think of them as two closely related mobile platforms,” said Grzesiu. “Shared foundations, different ways of working.”

**iOS** is the iPhone operating system. **iPadOS** is the iPad operating system, developed separately from iOS to support tablet-specific capabilities. Both manage apps, memory, networking, cameras and other hardware, allocate resources and enforce security. Their interfaces and some capabilities differ, but they were not invented independently from scratch.

The Windows captain wrote: “One manufacturer, two ships, thirty questions.” His onboard computer replied: “Four questions asked so far. Twenty-six predicted.”

## The same family of engines, different bridges

The captain of **NCC Linux** asked to inspect the engine room. When he spotted a sign reading **Darwin / XNU**, he smiled at the crew of HMS macOS.

“A family engine collection!”

“Shared foundations,” corrected an ISS iOS engineer. “That does not mean every component from one vessel can be installed unchanged in another.”

iOS, iPadOS and macOS share underlying Apple technologies, including the XNU kernel. It is not the Linux kernel. Related foundations help Apple develop security and continuity features, but apps, interfaces and software policies can still differ. A Mac app does not automatically become an iPhone app just because the hardware processors have things in common.

“SO I CAN'T MOVE THE ENTIRE MAC BRIDGE INTO THIS TINY SHIP?” the Windows captain asked.

“You can try,” said Grzesiu. “But once you've fitted the desk, three monitors and the captain's chair, there won't be room for the phone.”

## Everything under one finger, and where are my windows?

Aboard ISS iOS, the Windows captain tapped the screen, swiped an icon and accidentally turned on the flashlight.

“WHO TURNED THE LIGHTS ON?”

“You did, Captain,” the computer answered.

An iPhone interface is built primarily for touch interaction on a relatively small screen. Apps have their views, notifications, widgets and quick controls. iPadOS puts its larger surface to work with document handling, stylus support on compatible models, keyboards, pointing devices and forms of multitasking that depend on the hardware and system release. That does not turn an iPad into an identical copy of a Mac.

The IPS iPadOS captain demonstrated a workspace with a document, notes and reference material.

“See? I can work on more than one thing.”

“CAN I OPEN SIXTY WINDOWS?” asked the Windows captain.

“Could we finish reading the first document?” suggested Agnieszka, arriving with a stack of invoices.

## The app store and the guard who knows the rules

A guard with a tablet stood outside the software depot.

“Navigation app? Certainly. Photo editor? Certainly. An app that rebuilds the engine during flight? One moment, please.”

“WHERE IS FREEDOM?” protested the NCC Linux captain.

“On its lunch break,” muttered Grzesiu.

For consumer Apple devices, the **App Store** is the primary app distribution route. Apple applies code-signing, review and distribution rules. Other installation or distribution methods exist in certain regions or circumstances, and developers and organizations use separate mechanisms. So neither “anything goes” nor “absolutely nothing beyond the App Store is ever possible” tells the full story. Availability depends on factors such as region, system version and distribution method.

The captain of MSS Android stepped up to the counter.

“Our manufacturers and users may have a wider choice of stores and installation methods. That requires care too.”

“Our shipyard prefers a controlled and predictable environment,” replied the ISS iOS captain.

“Gentlemen,” interrupted Agnieszka, “I just need a calculator. Can we skip the intergalactic commission?”

## Each app gets a cabin, not the keys to the whole ship

Suddenly, a weather app requested access to the microphone. Grzesiu stared at the screen.

“Why does a weather forecast need a microphone?”

“To hear the rain?” the Windows captain suggested.

iOS and iPadOS isolate applications using **sandboxing**. One app should not freely inspect another app's data or take control of the entire device. Apps request permission for selected resources, such as the camera, microphone, photos, location and contacts. Users can manage many of these permissions in Settings. But a permission prompt is not a certificate of honesty: it still matters why an app wants access.

“So everyone gets their own cabin?” asked the captain of ISS iOS.

“Yes,” said Grzesiu. “We don't hand out universal master keys like the Manager did at the hotel. We've already covered that in our story about **passwords and MFA**.”

## Face recognition cannot replace common sense

At the identity checkpoint, the computer requested authentication. The Windows captain gave it his widest smile.

“RECOGNIZE ME BY MY CHARISMA!”

“Unsupported authentication factor,” came the reply.

Depending on the model, Apple devices use **Face ID** or **Touch ID**, alongside a device passcode. Hardware-backed key protection, data encryption, verified system startup and code signing help resist many attacks. Biometrics are not a magic pass, however, and a stolen passcode, compromised account or successful phishing attempt can still cause serious damage. Our **phishing story** explains how attackers impersonate trusted organizations.

“What if I use 0000 as my passcode?” suggested the Windows captain.

“Perhaps we'll give you your phone back after training,” said Grzesiu.

## Docking with HMS macOS without a grand ceremony

Three Apple vessels lined up at a shared docking station. The captain of ISS iOS wanted to send a photograph, the captain of IPS iPadOS wanted to continue taking notes, and the HMS macOS commander wanted the document on a larger display.

“Cargo ready,” reported the captain of ISS iOS.

“Receiving,” replied the captain of HMS macOS. “Please refrain from sending thirty more photographs of your antenna.”

Apple ecosystem features such as **AirDrop**, **Handoff**, **Universal Clipboard**, **Continuity Camera** and, on compatible hardware, **Sidecar** and **Universal Control**, can help transfer files, tasks and controls between Macs, iPhones and iPads. Each feature has its own requirements: supported hardware, suitable system releases, connectivity settings, sometimes a shared account and other conditions. The logo alone is not enough.

“What about me?” asked the captain of MSS Android.

“There are ways to exchange data with other vessels too,” answered Grzesiu. “Networks, cloud services, standard protocols, compatible apps, sometimes a cable. Not every docking bay is the same, but the port doesn't end at one manufacturer.”

“So I can come in?”

“Of course. Just don't park three thousand ships in one bay.”

## The cloud is a warehouse, not a spell

Agnieszka opened an iPhone document on IPS iPadOS.

“Wonderful. It's on a second device. Where is it physically stored?”

“That depends on the app, synchronization settings and storage choices,” Grzesiu replied. “Some data stays locally, some lives in iCloud or another service.”

**iCloud** provides synchronization and other services across devices. It is convenient, but synchronization is not the same as an independent **backup**. A deletion, overwrite or error may propagate to other devices depending on the service. It is worth knowing what actually syncs, what an individual device backup includes and how recovery works.

“So if I put a document in the cloud, I never need another copy?” asked the Windows captain.

“Questions like that are why you're no longer allowed into the warehouse,” Agnieszka replied.

## An update in port, a battery in space

Halfway through the inspection, ISS iOS displayed a software update notification.

“Can I postpone it?” its captain asked.

“You can schedule installation within the device's capabilities,” said the engineer. “But postponing security fixes forever is not a strategy.”

Apple releases iOS and iPadOS updates for supported devices, but older models eventually stop receiving the latest major versions or features. Support, app compatibility and hardware capabilities must be checked for the specific model. Battery power creates another trade-off: the system limits some background activity to avoid draining the device before the day ends. The precise behavior depends on the task, permissions and system mechanisms.

“I WANT EVERYTHING RUNNING ALL THE TIME!” demanded the Windows captain.

“Then bring your own power plant,” Grzesiu replied.

## A garden with a gate, not a prison without an exit

At the end of the inspection, the crews gathered by a giant gate marked “Apple Ecosystem”. ISS iOS, IPS iPadOS and HMS macOS stood on one side. On the other, the captain of MSS Android was organizing his fleet, while the captain of NCC Linux inspected the gate to see whether it could be rebuilt.

“So everything here is locked?” asked the MSS Android commander.

“Not everything. But our shipyard sets more of the rules,” replied the captain of IPS iPadOS. “In exchange, we get a certain level of consistency and integration.”

“WHO DECIDES WHICH IS BETTER?” asked the Windows captain.

“The user,” Agnieszka replied. “Preferably one who understands the trade-offs.”

**iOS and iPadOS are mobile operating systems tightly integrated with Apple hardware, software and services.** They can provide convenience, ecosystem consistency and extensive security controls, while restricting some kinds of customization and app distribution. The iPhone emphasizes mobile use, while the iPad adds tools for working on a larger screen. Neither is simply a miniature macOS or “Android in a different uniform”.

The USS Windows computer was asked for a final report.

“Inspection complete. Both vessels operational. The Windows captain attempted to open sixty windows on a phone screen. The NCC Linux captain requested kernel documentation. The MSS Android captain asked for a wider dock.”

“WHAT ABOUT MY REQUEST FOR A BIGGER IPHONE SCREEN?”

“Forwarded to the shipyard. Reply: ‘Please consider an iPad.’”

---

*Operating Systems Fleet notice: ISS iOS and IPS iPadOS have been cleared for launch. HMS macOS has offered them the family dock. MSS Android uses the inter-fleet terminal, and Grzesiu has found the first cable today that nobody needs. Moments later, it turns out to be the cable for his sandwich.* 🚀🤣❤️