

Supporting the Enterprise with OS X Automation

Creating solutions using OS X automation technologies

Session 306

Sal Soghoian Product Manager Automation Technologies

“The Enterprise”

“The Enterprise”



“Workflow Strategies”

“Workflow Strategies”

“Workflow Strategies”

Develop a library of tools

- Avoid “one-tool” mindset



“Workflow Strategies”

Take advantage of strengths

- Use the right tool for the job

“Workflow Strategies”

Take advantage of strengths

- Use the right tool for the job



“Workflow Strategies”

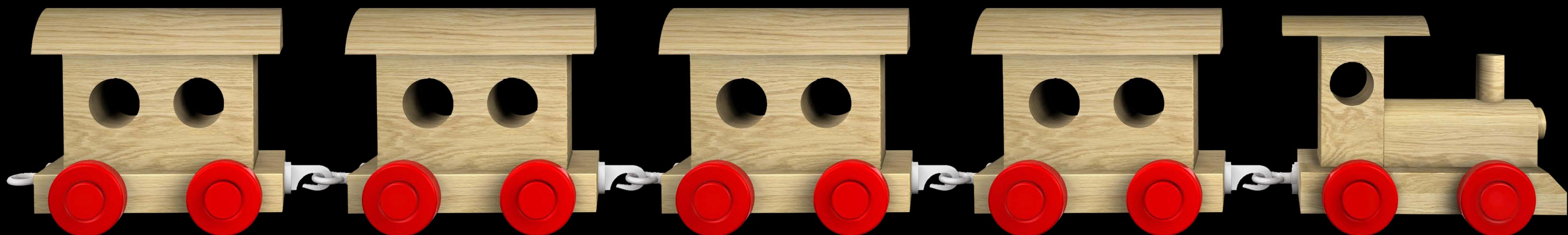
Design workflows as connected modules

- Enable repurposing, adaptation and expansion

“Workflow Strategies”

Design workflows as connected modules

- Enable repurposing, adaptation and expansion



“Workflow Strategies”

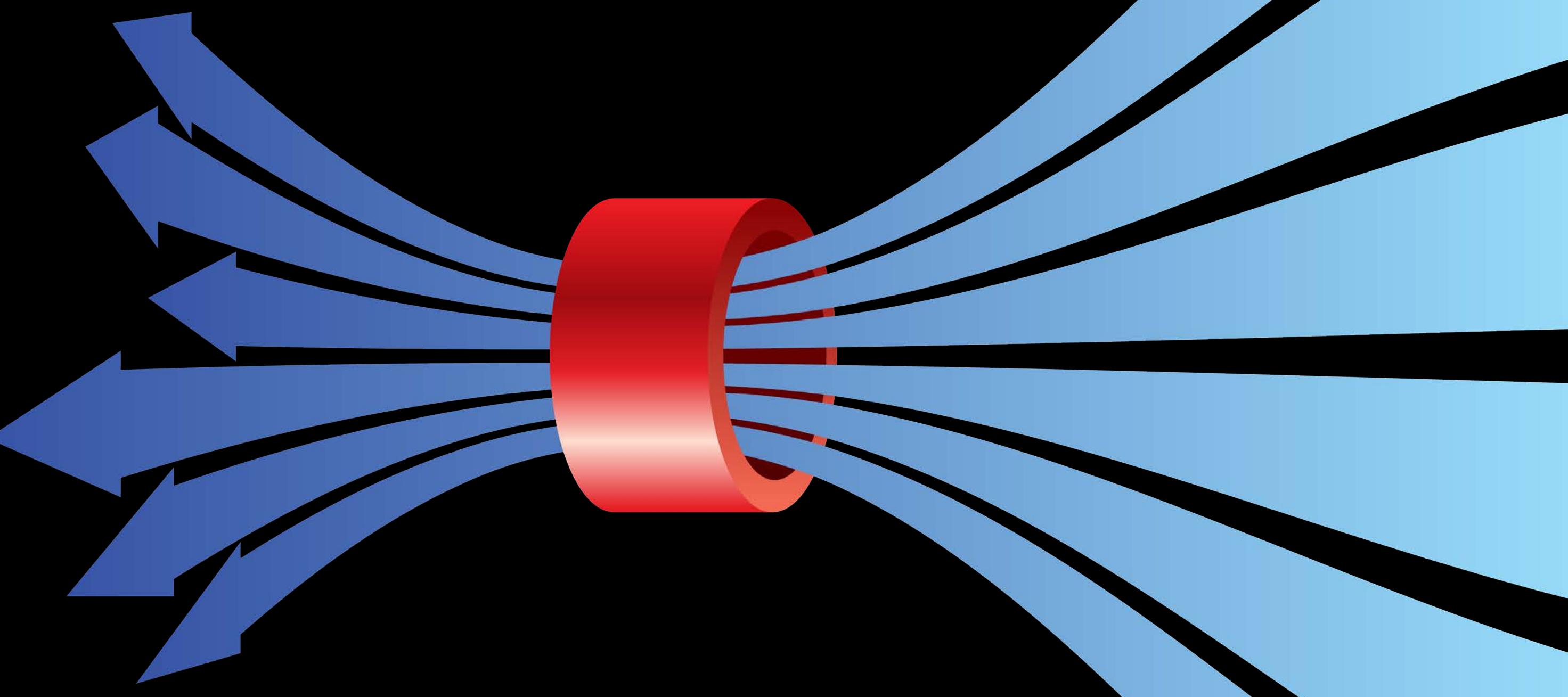
Optimize workflows

- Eliminate bottlenecks
- Reduce repetition
- Remove complexity/confusion

“Workflow Strategies”

Optimize workflows

- Eliminate bottlenecks
- Reduce repetition
- Remove complexity/confusion



“Workflow Strategies”

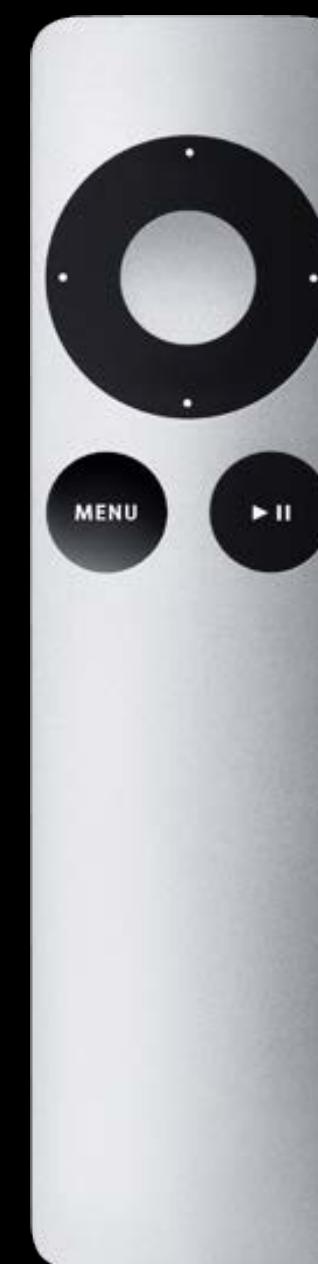
Design workflows for the user

- **Complex** solutions are **avoided**
- **Convenient** solutions are **used**

“Workflow Strategies”

Design workflows for the user

- **Complex** solutions are **avoided**
- **Convenient** solutions are **used**



“Workflow Strategies”

- ✓ Use all available tools
- ✓ Take advantage of strengths
- ✓ Design workflows to be modular
- ✓ Eliminate bottlenecks, repetition, and complexity
- ✓ Design workflows for the user

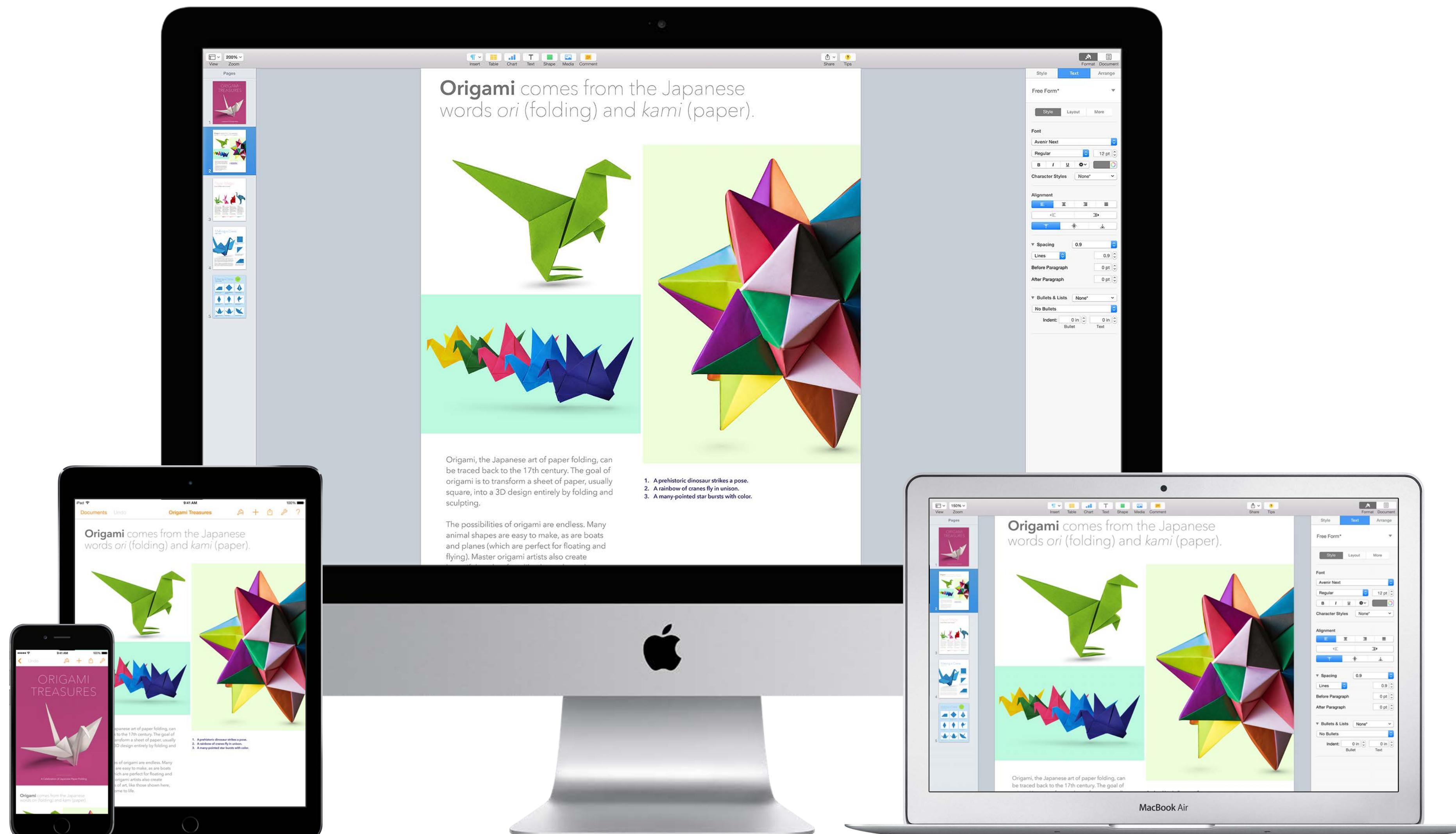
“Workflow Strategies”

- ✓ Pursue inclusion

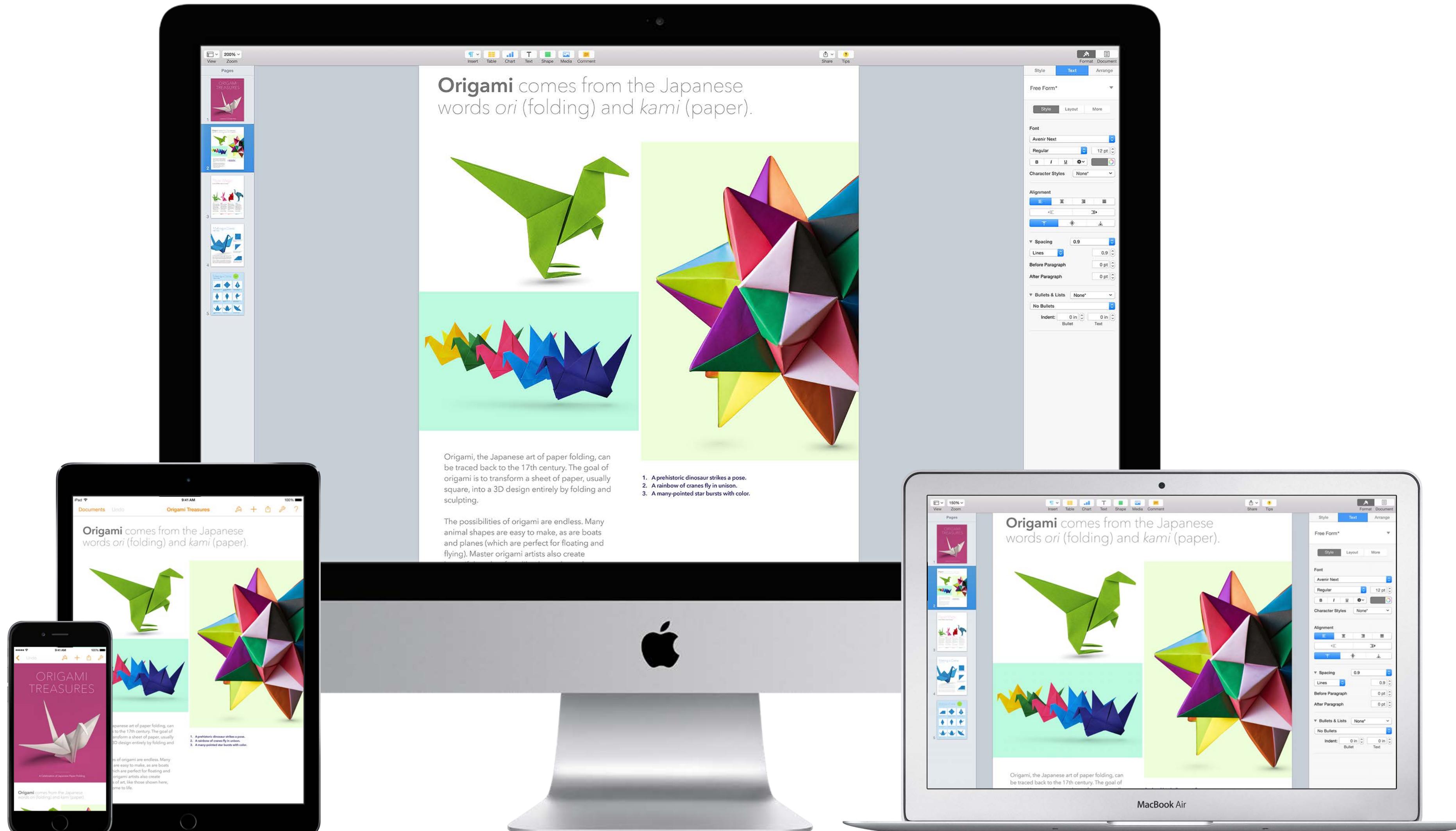
“Workflow Strategies”

- ✓ Pursue inclusion

Success = AND not OR



iOS and OS X



OS X

Depth and power



OS X

Depth and power

Frameworks

- Text
- Media - Image - Video
- Animation
- Core Data
- User services
 - Location and Maps - Calendar
- Speech
 - Recognition - Dictation - Command and Control



OS X

Depth and power

Connective technologies

- WiFi - Bluetooth - Ethernet
- Bonjour
- File Sharing (AFP - SMB)
- Web Sharing
- AirDrop



OS X

Depth and power

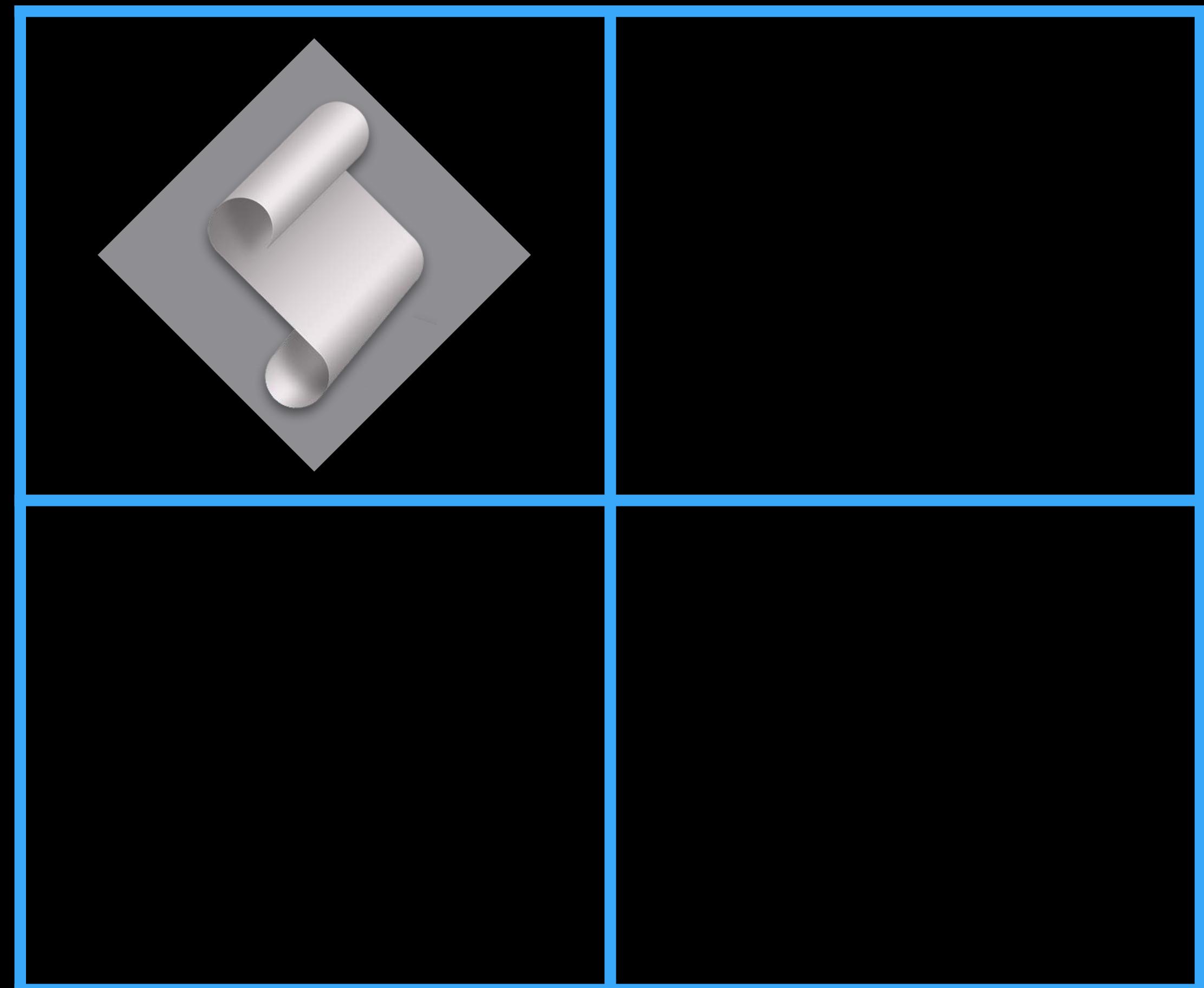
Automation technologies

OS X

Depth and power

Automation technologies

- AppleScript

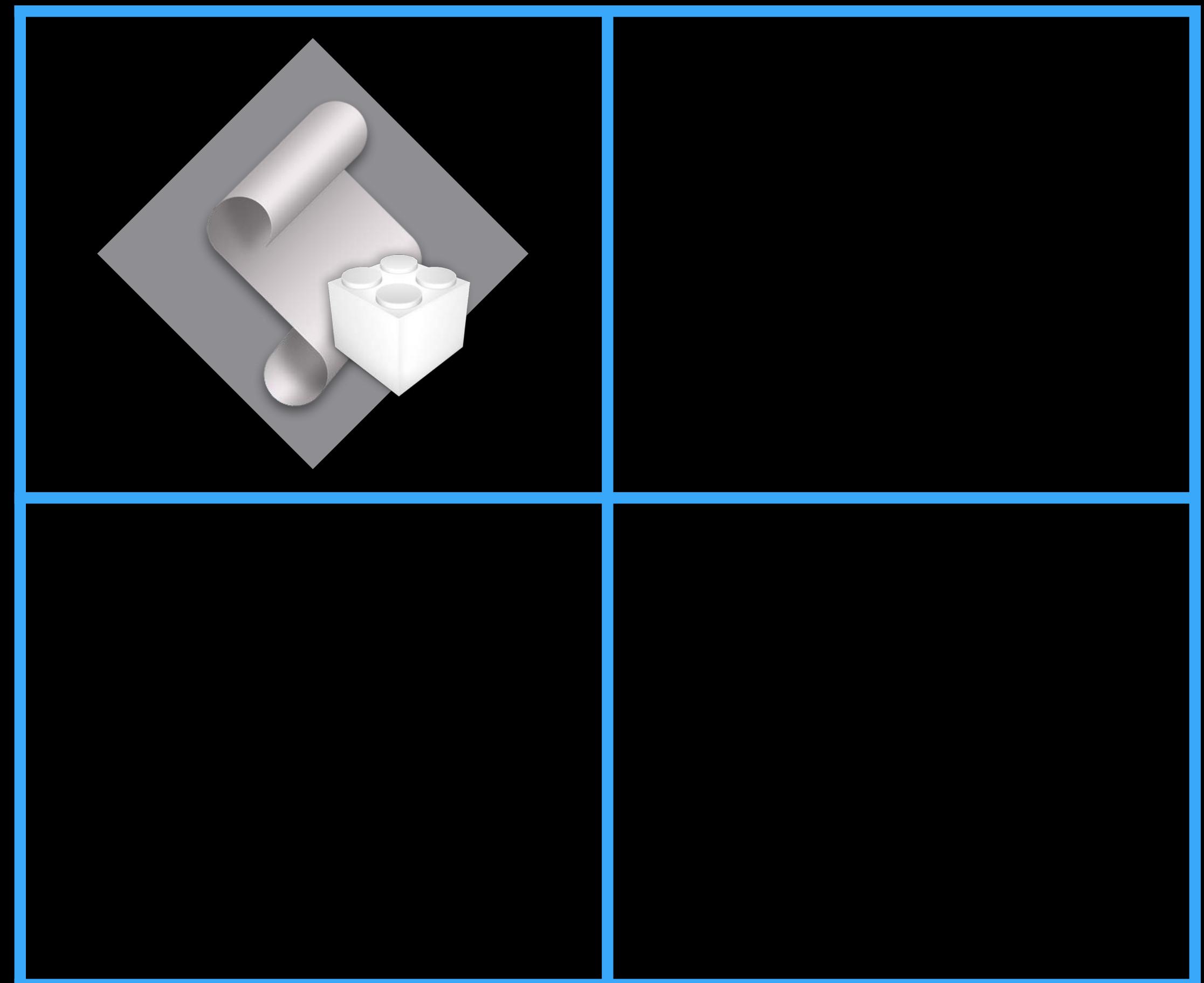


OS X

Depth and power

Automation technologies

- AppleScript
- AppleScriptObjective-C

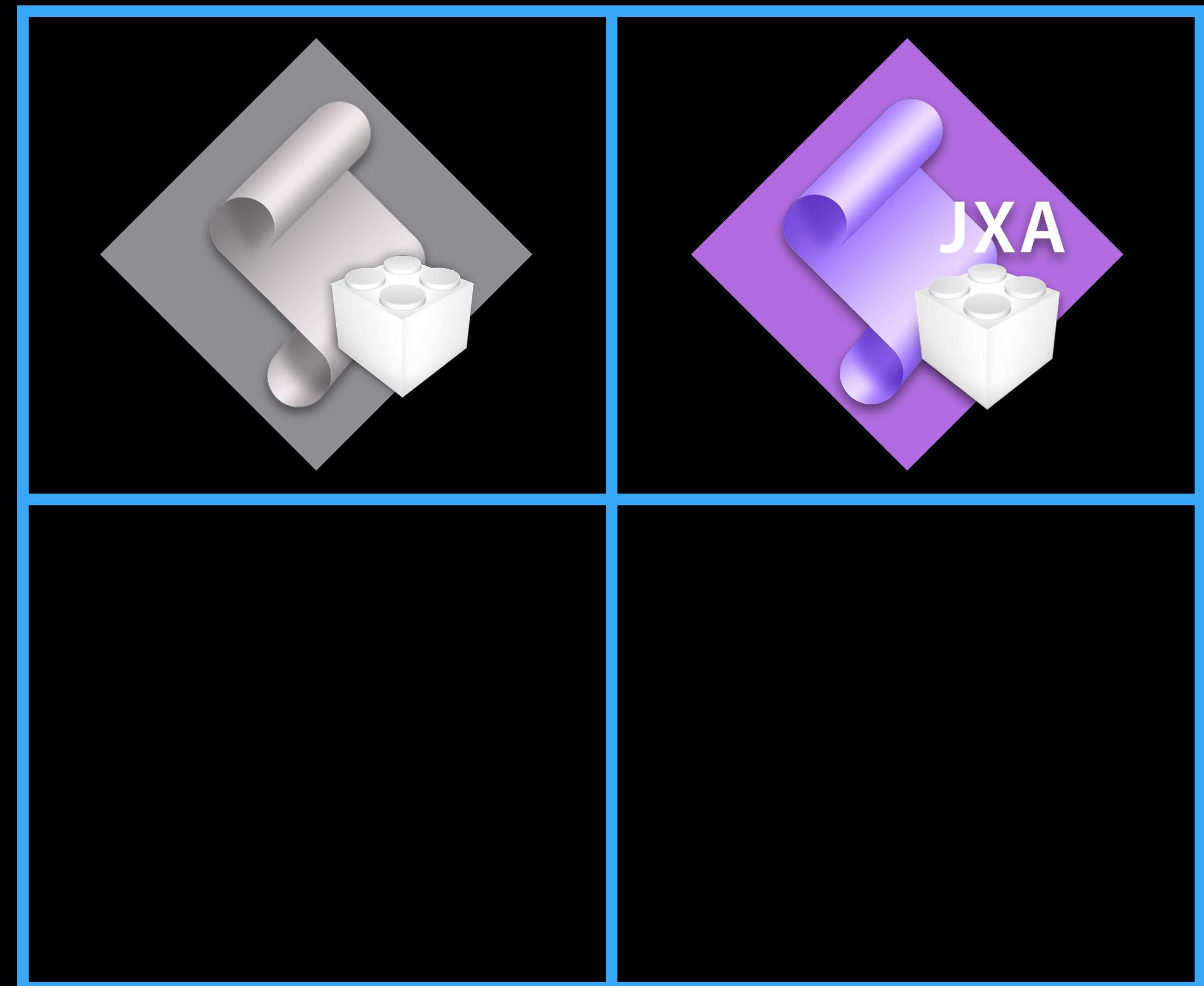


OS X

Depth and power

Automation technologies

- AppleScript
- AppleScriptObjective-C
- JavaScript for Automation (JXA)

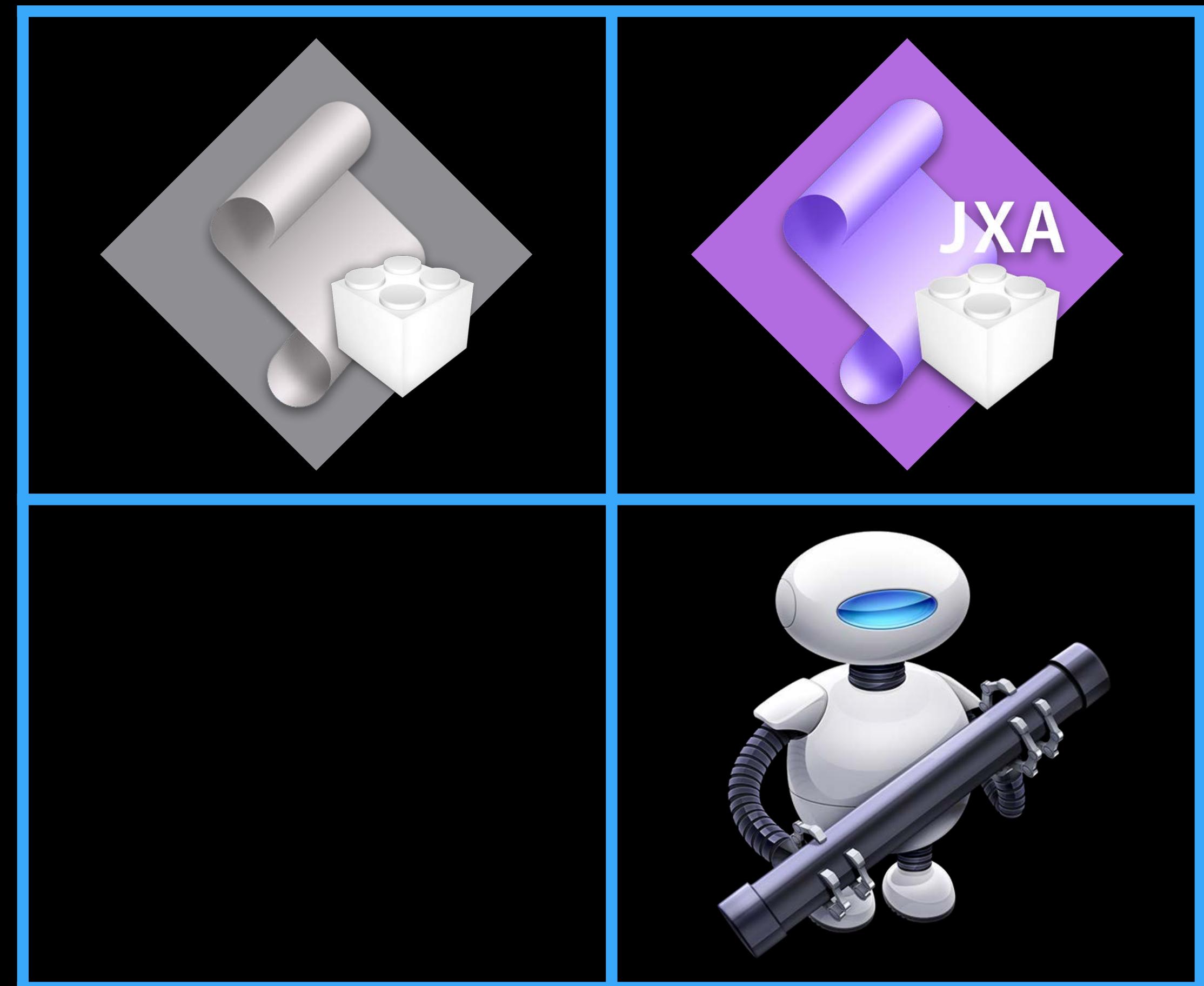


OS X

Depth and power

Automation technologies

- AppleScript
- AppleScriptObjective-C
- JavaScript for Automation (JXA)
- Automator

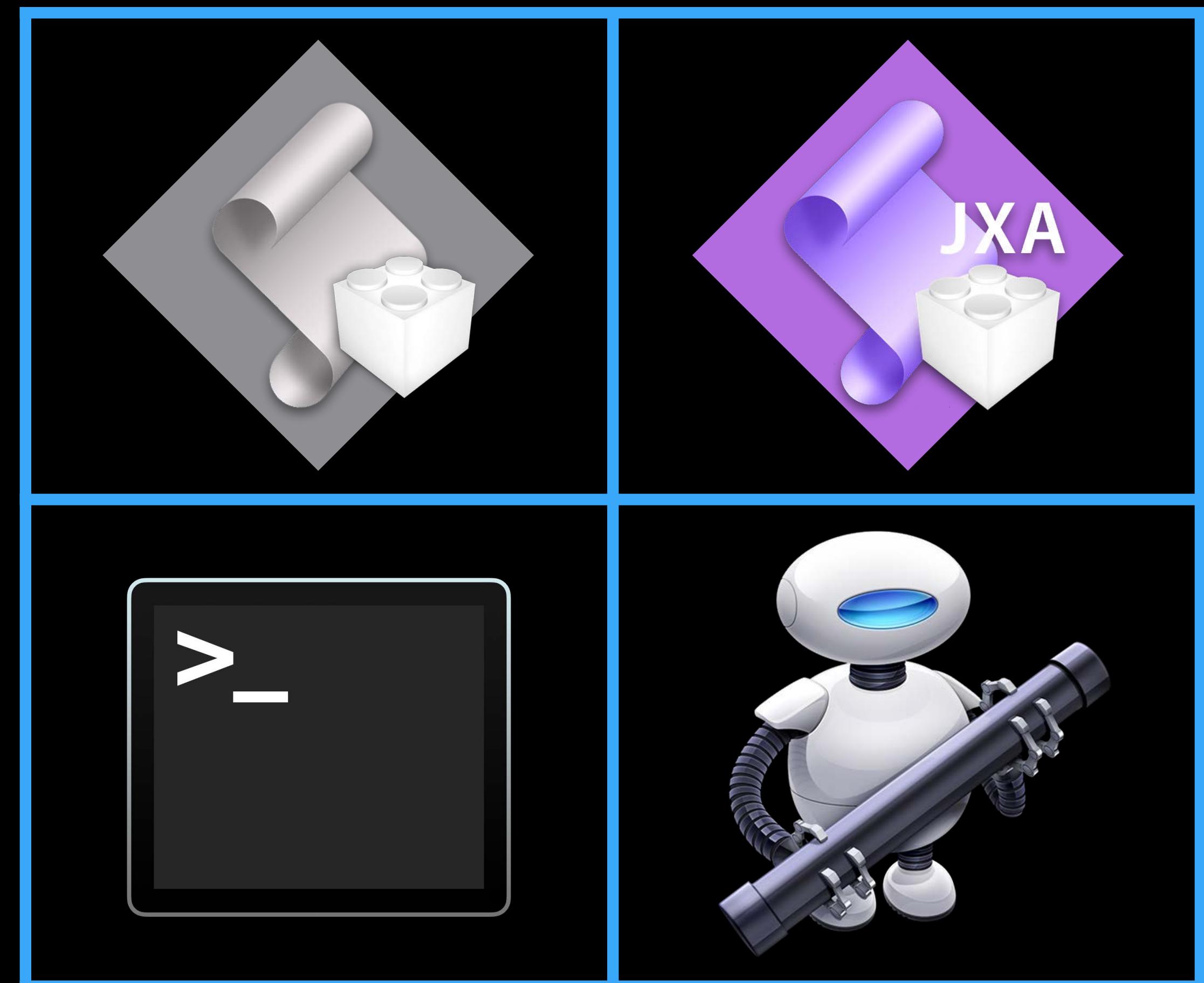


OS X

Depth and power

Automation technologies

- AppleScript
- AppleScriptObjective-C
- JavaScript for Automation (JXA)
- Automator
- UNIX shells • Perl • Python • Ruby



OS X

Depth and power

Speed

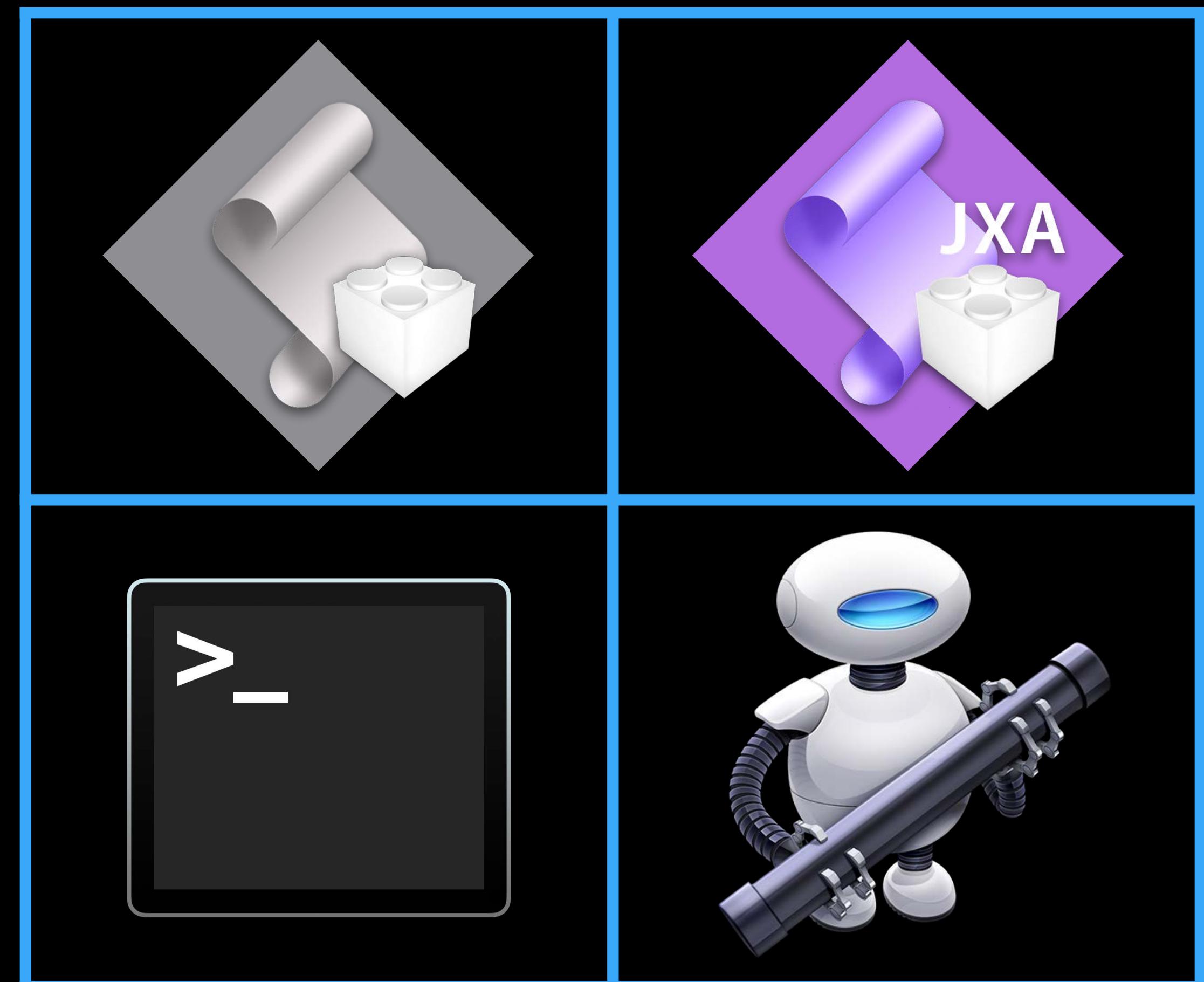
Accuracy

Consistency

Convenience

Flexibility

Scalability



Enterprise Automation Scenarios

Enterprise Automation Scenarios

Workgroup image repository

Enterprise Automation Scenarios

Workgroup image repository

Automating document construction

Enterprise Automation Scenarios

Workgroup image repository

Automating document construction

Automating setup of iOS devices

Workgroup Image Repository

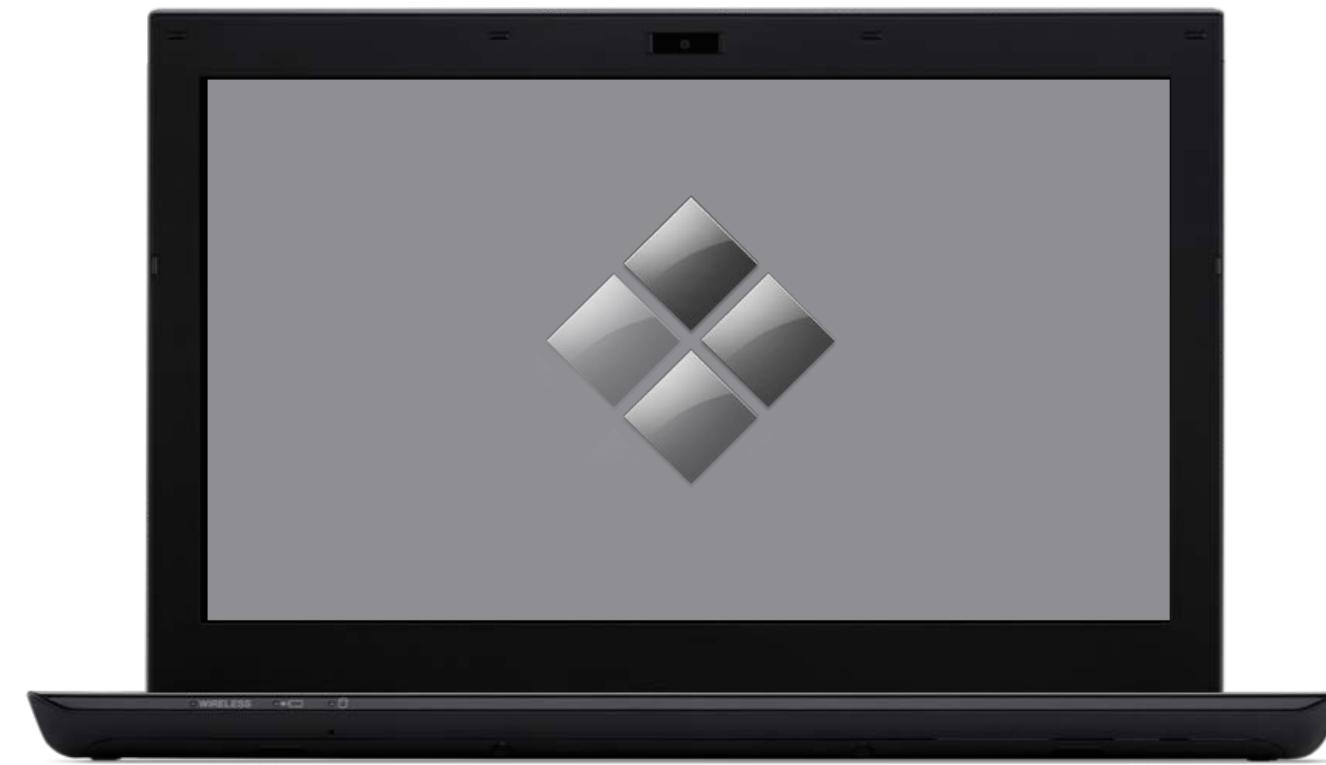
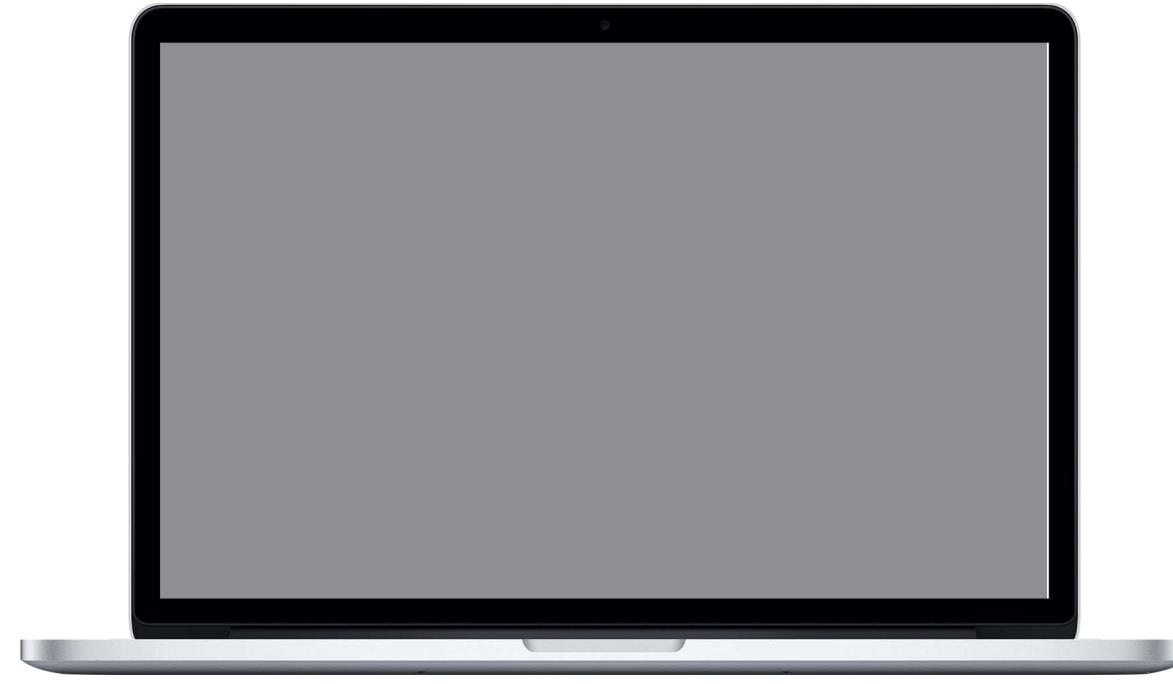
Off-cloud workgroup sharing

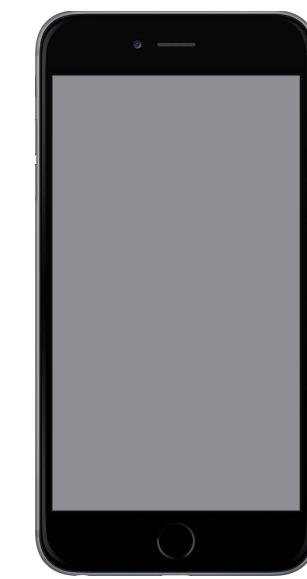
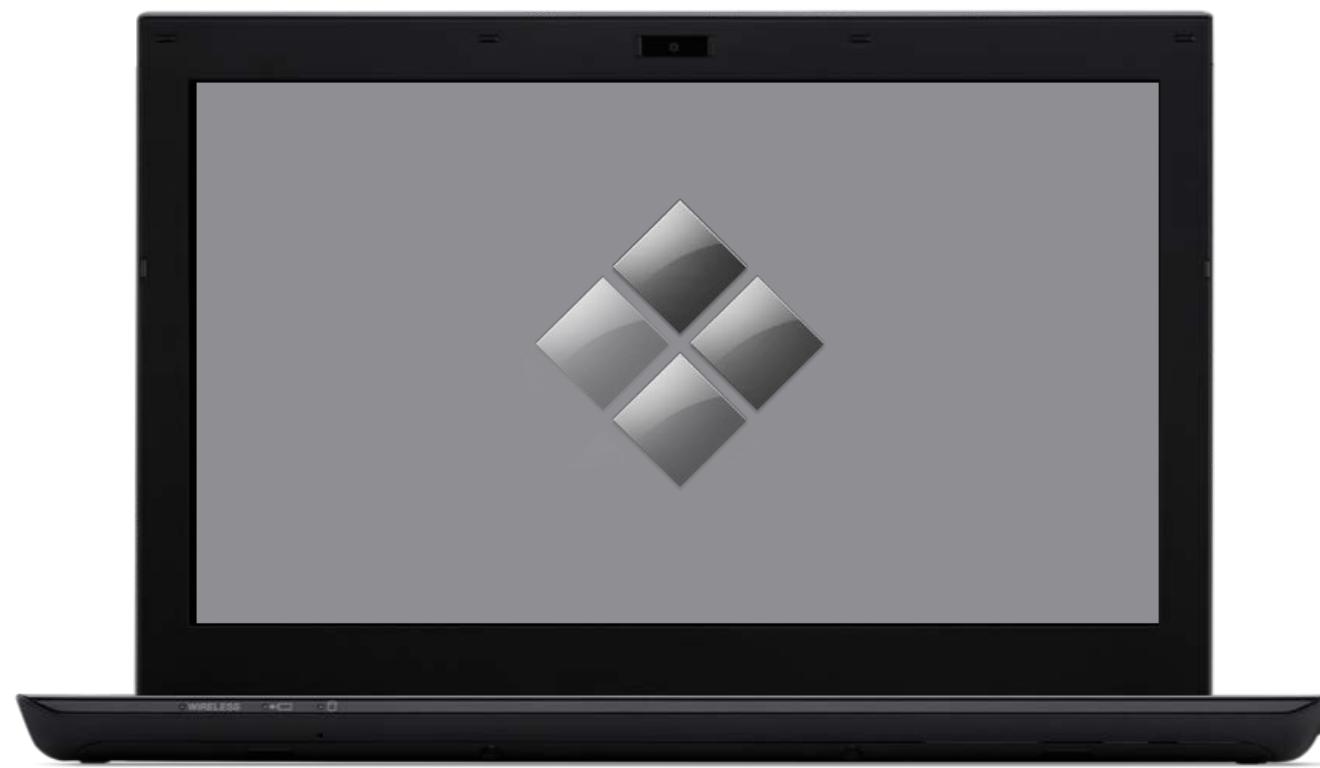
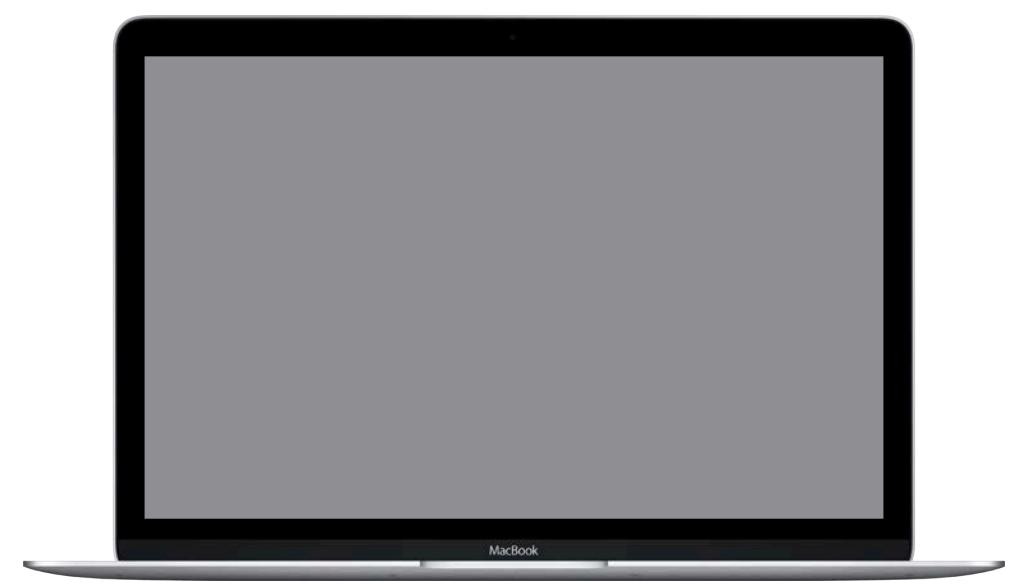
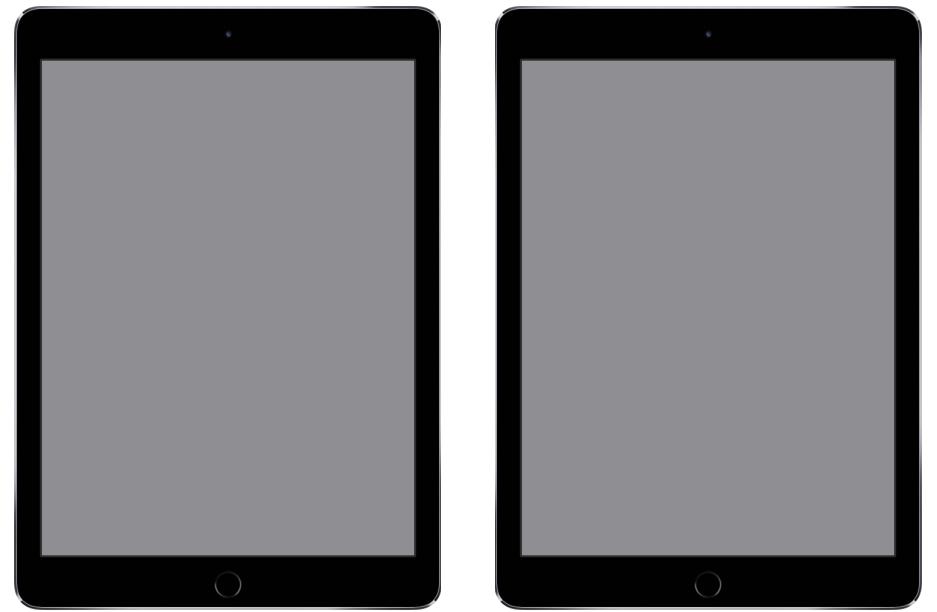
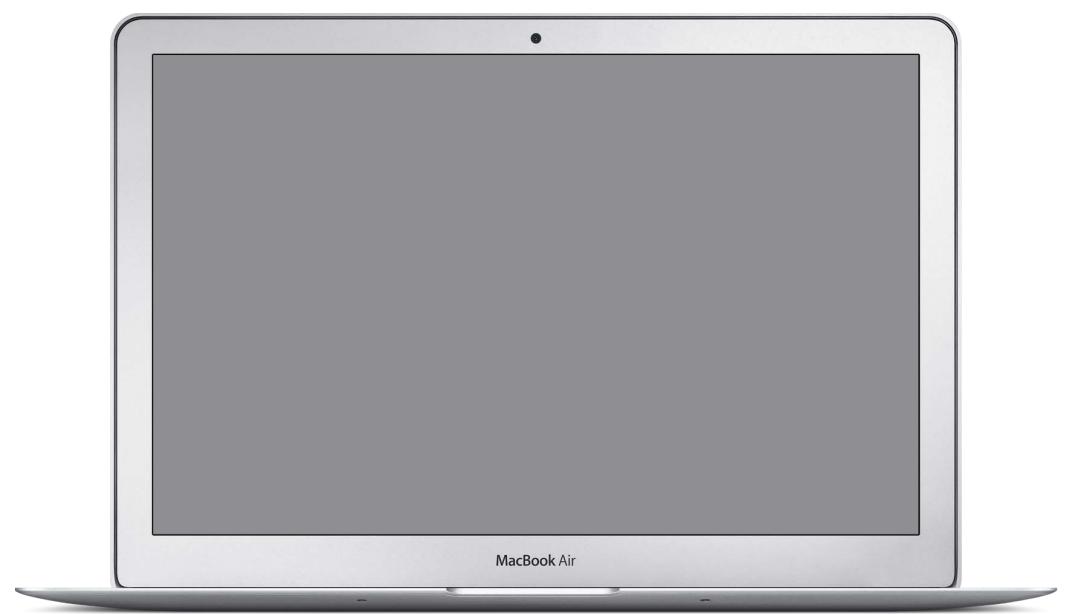


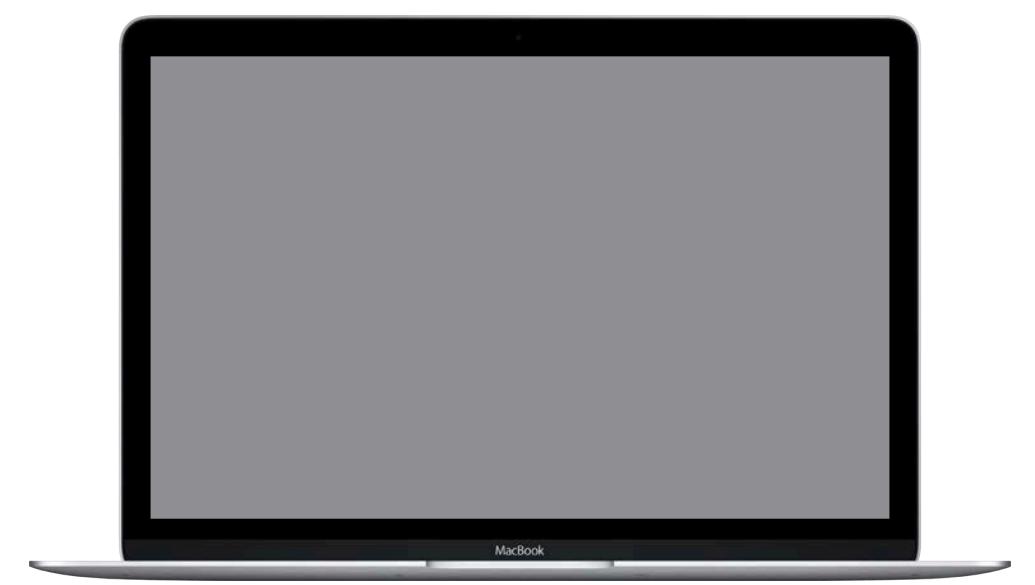
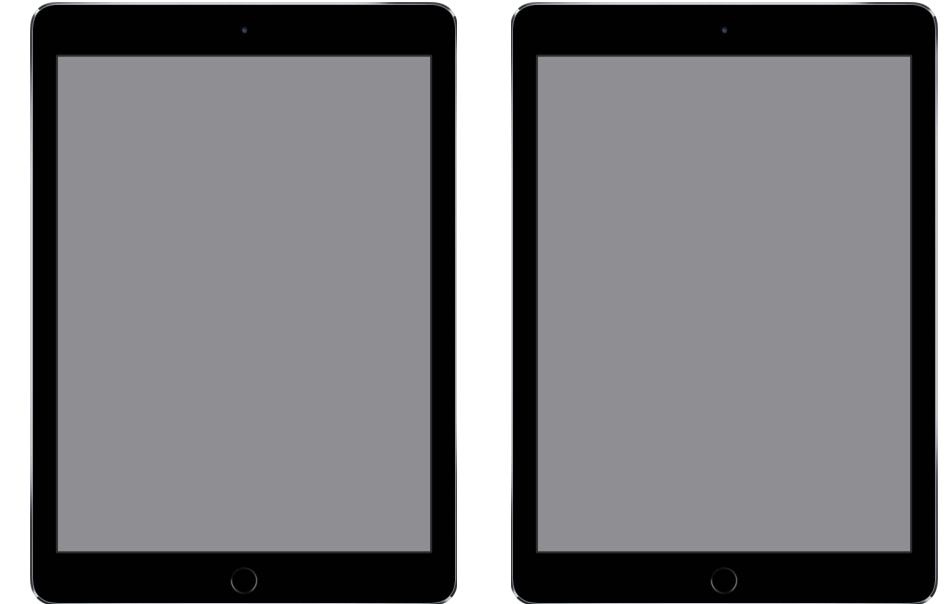
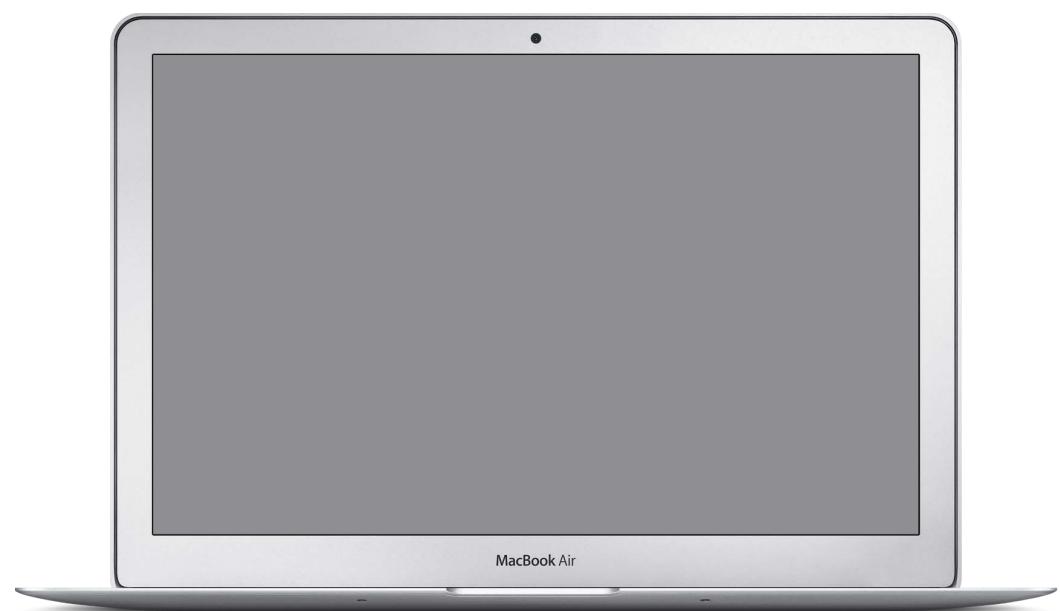




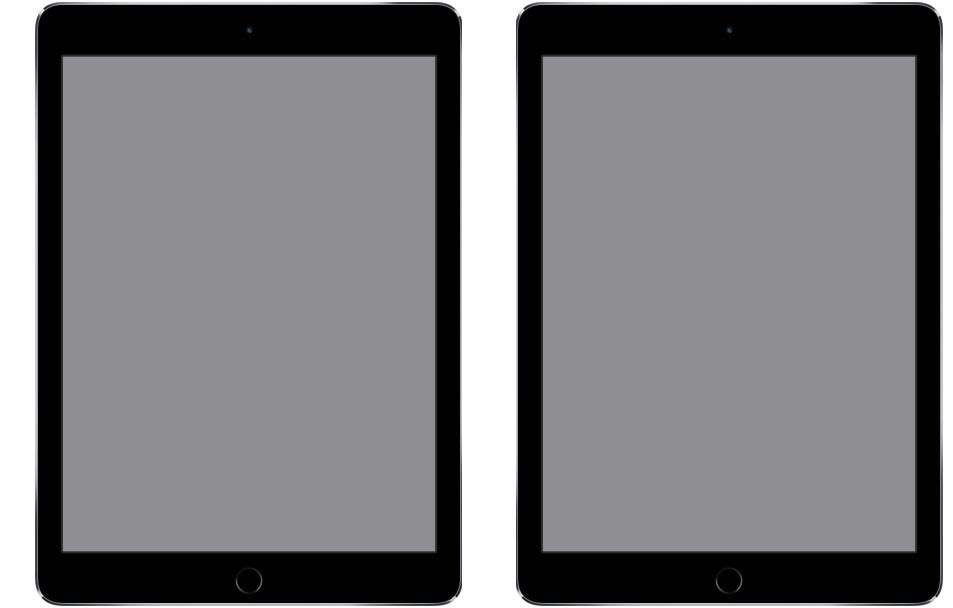




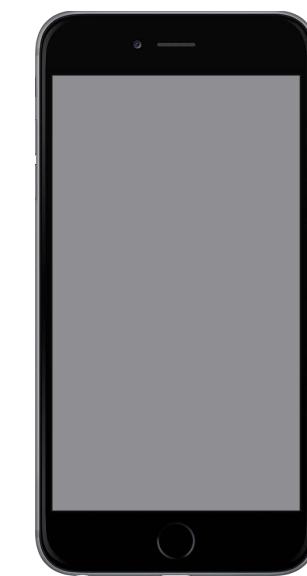
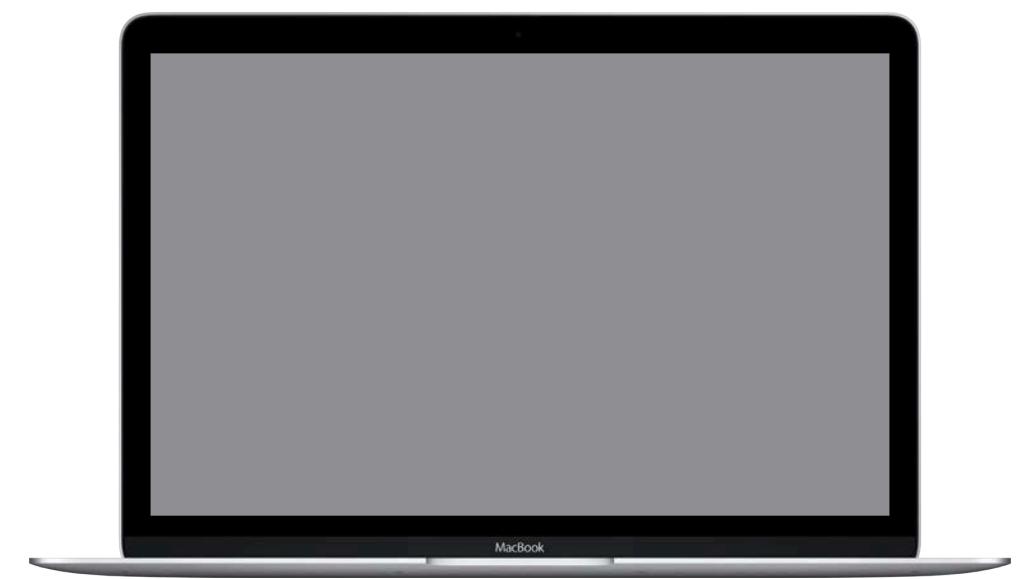
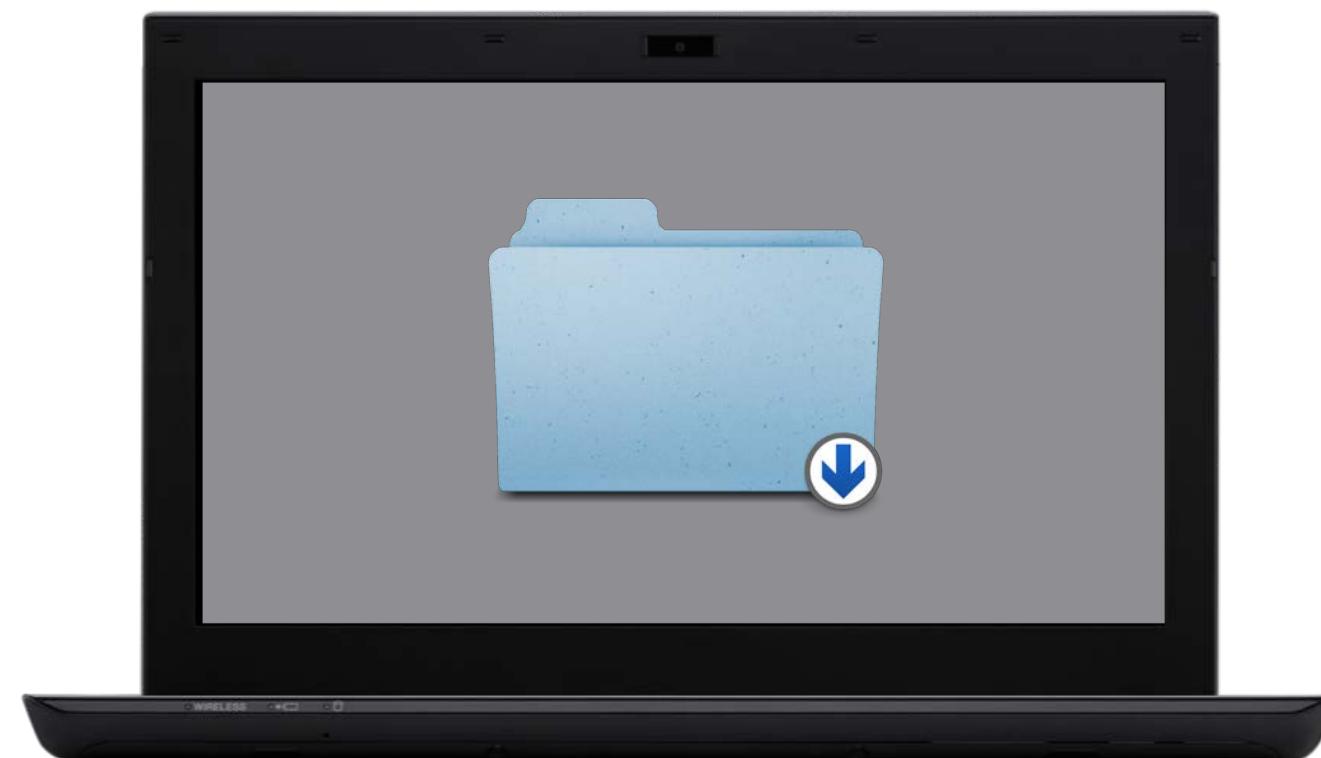
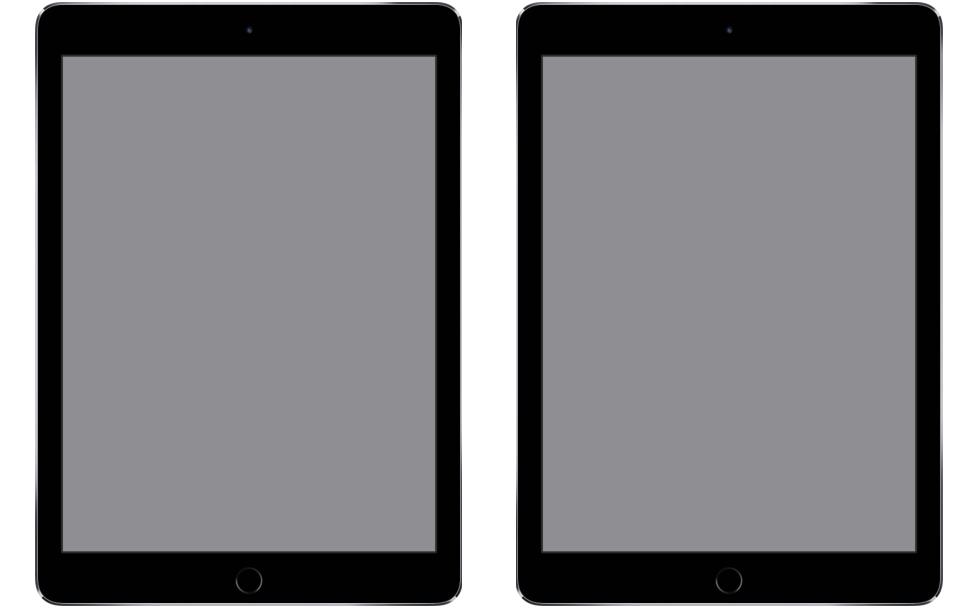




File Sharing

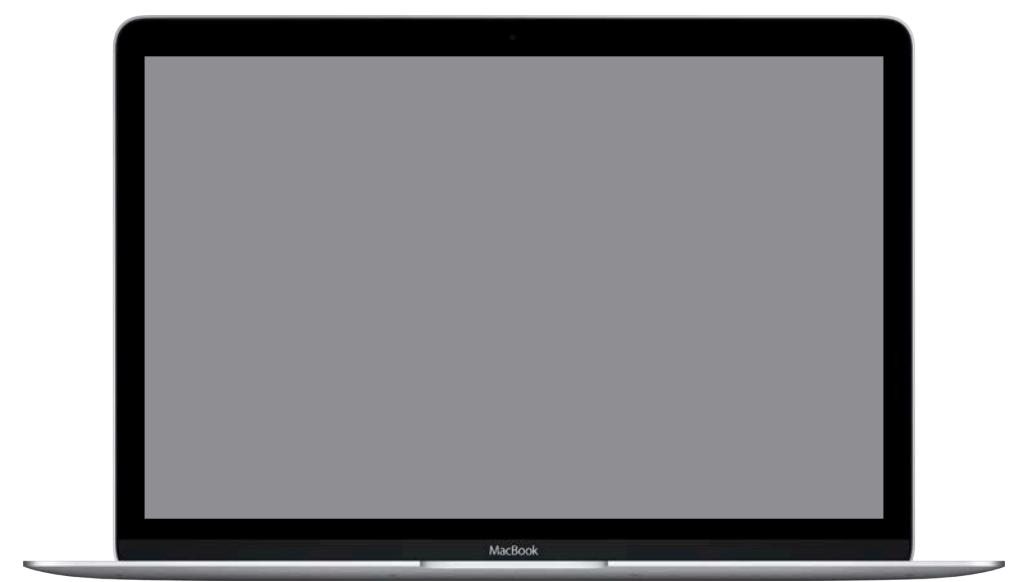
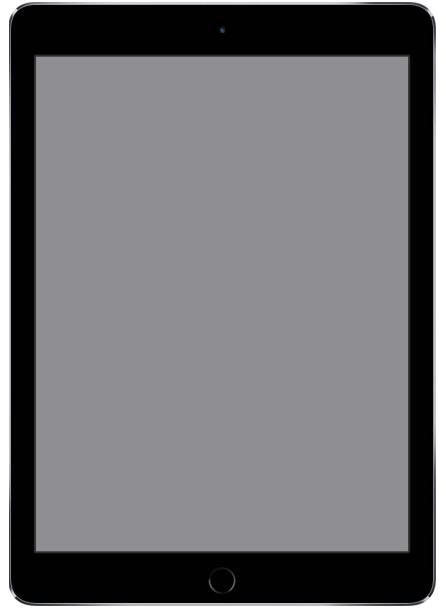
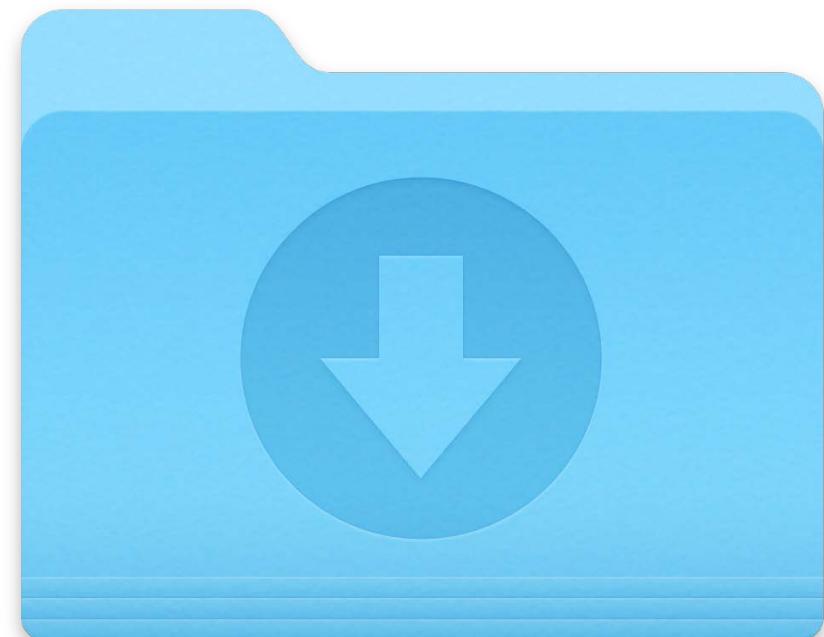
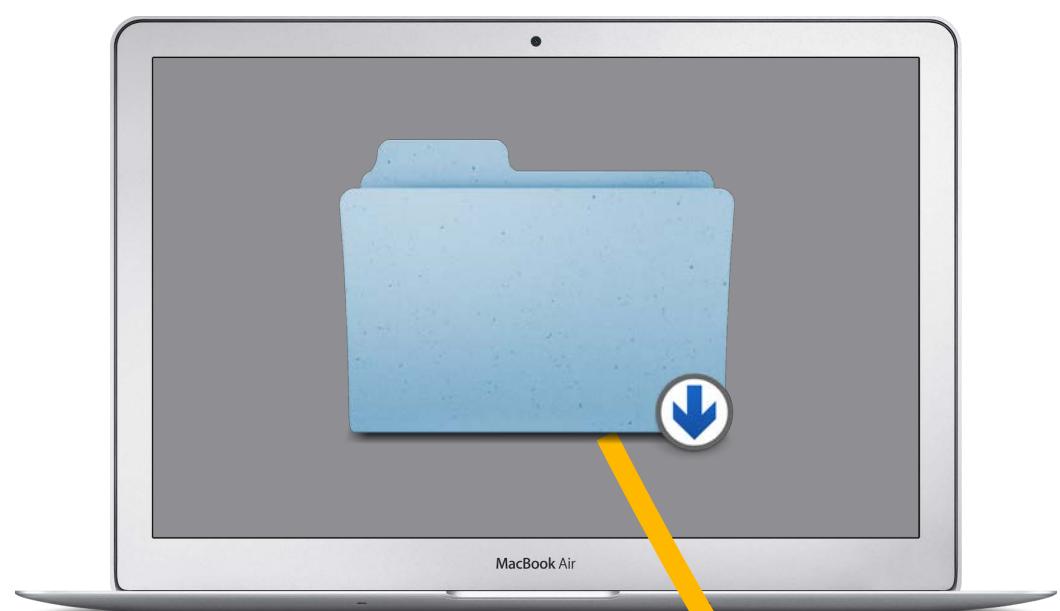


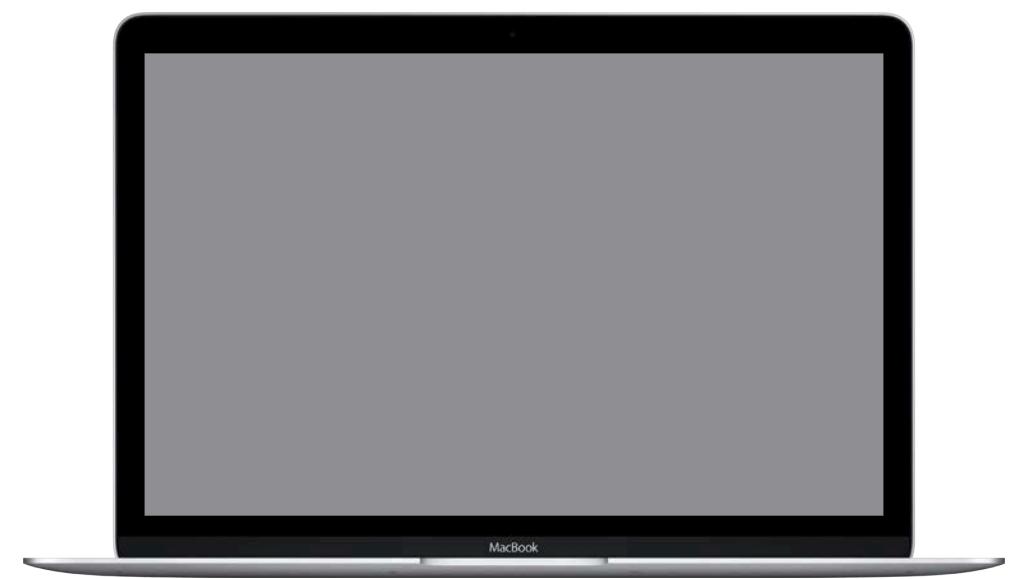
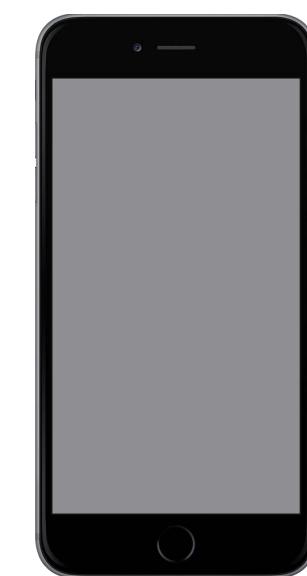
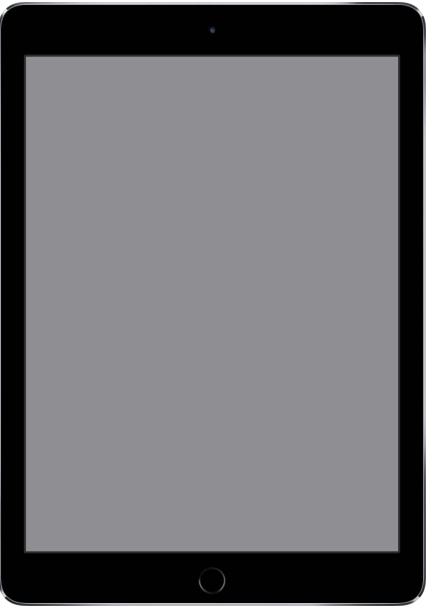
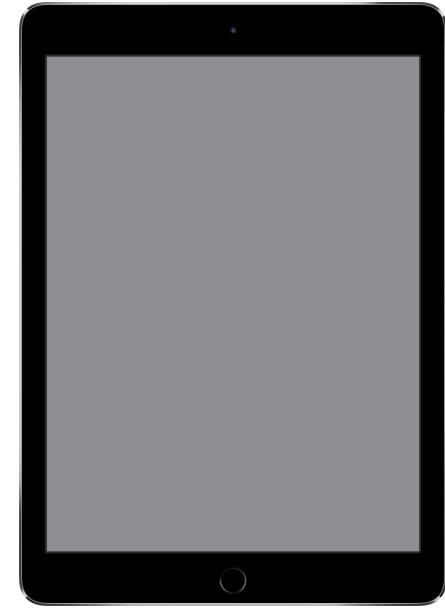
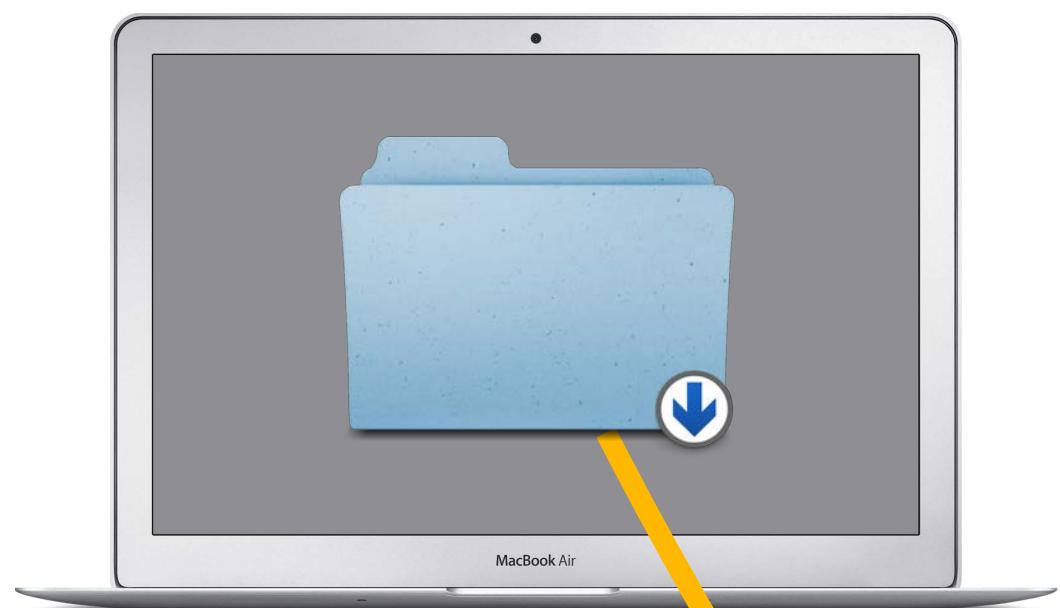
File Sharing



File Sharing



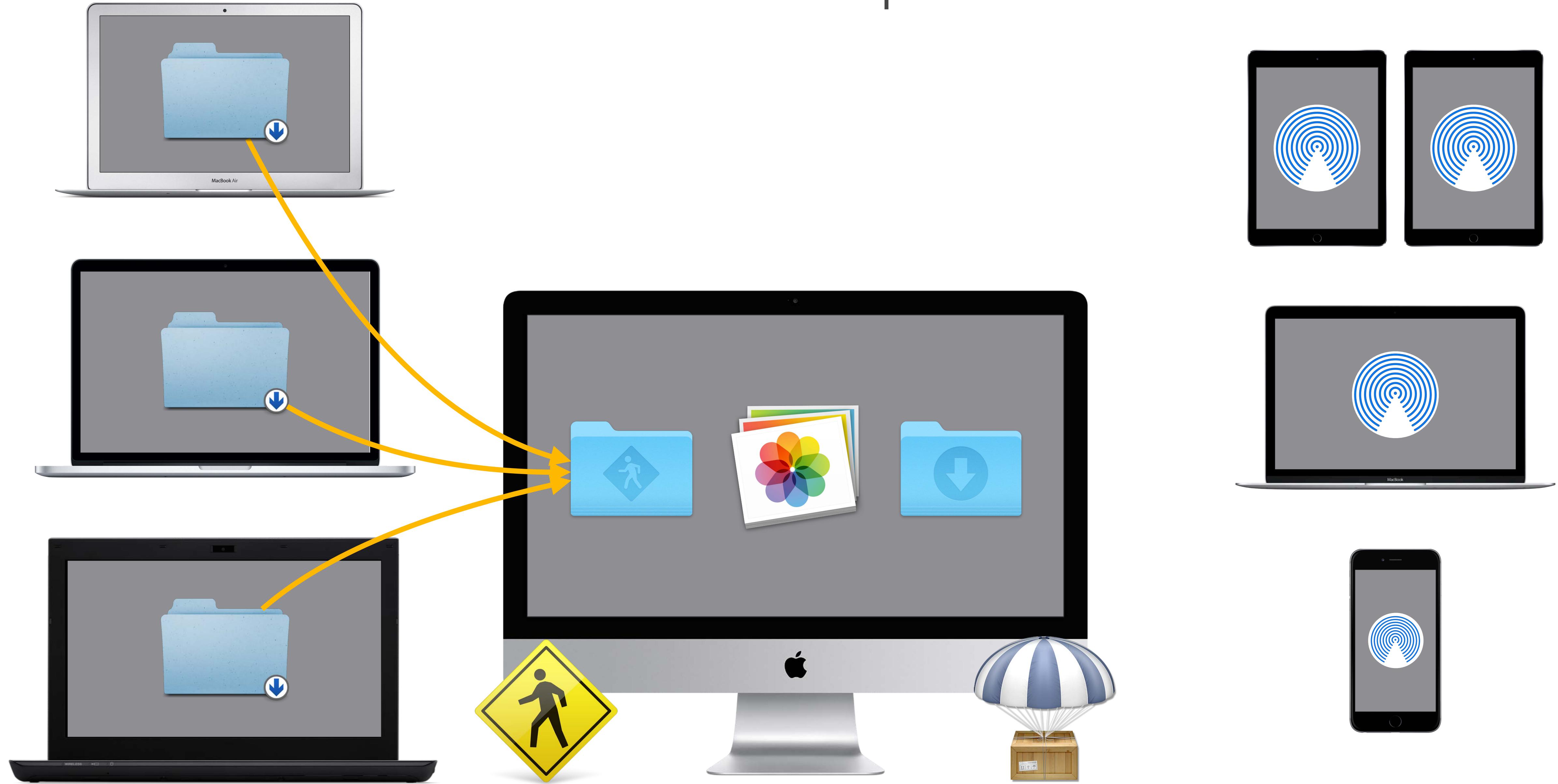




AirDrop



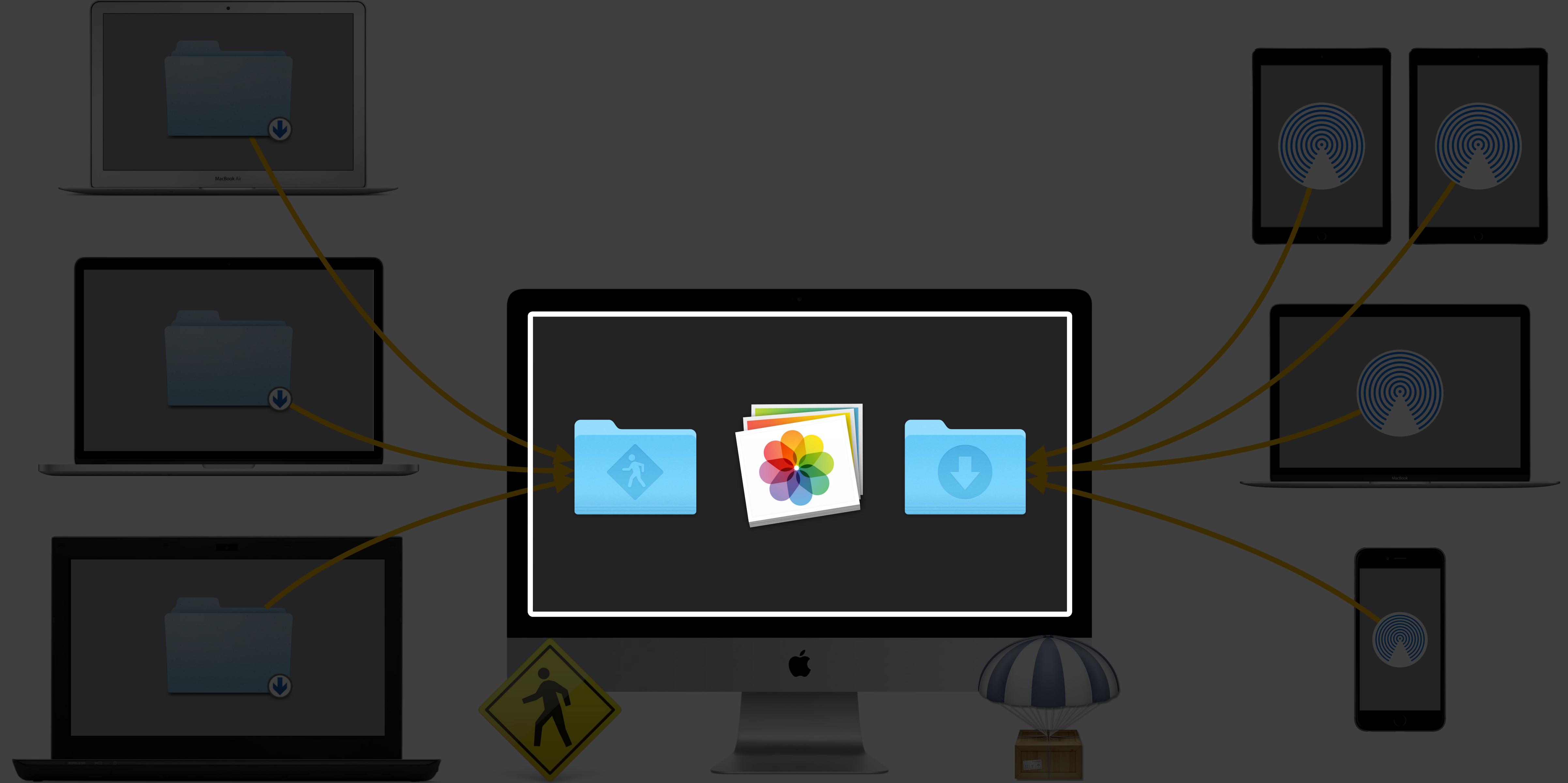
AirDrop

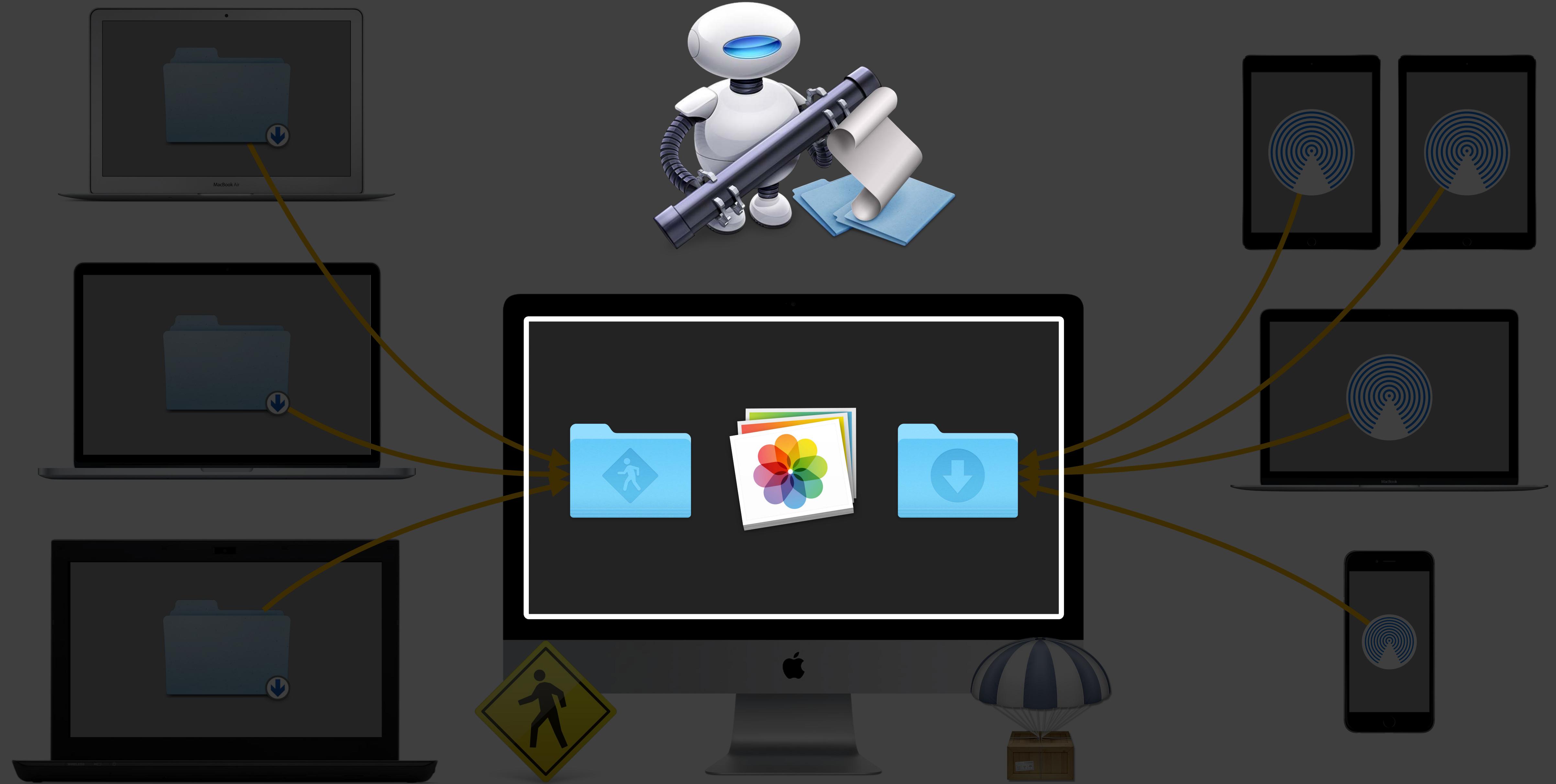


AirDrop

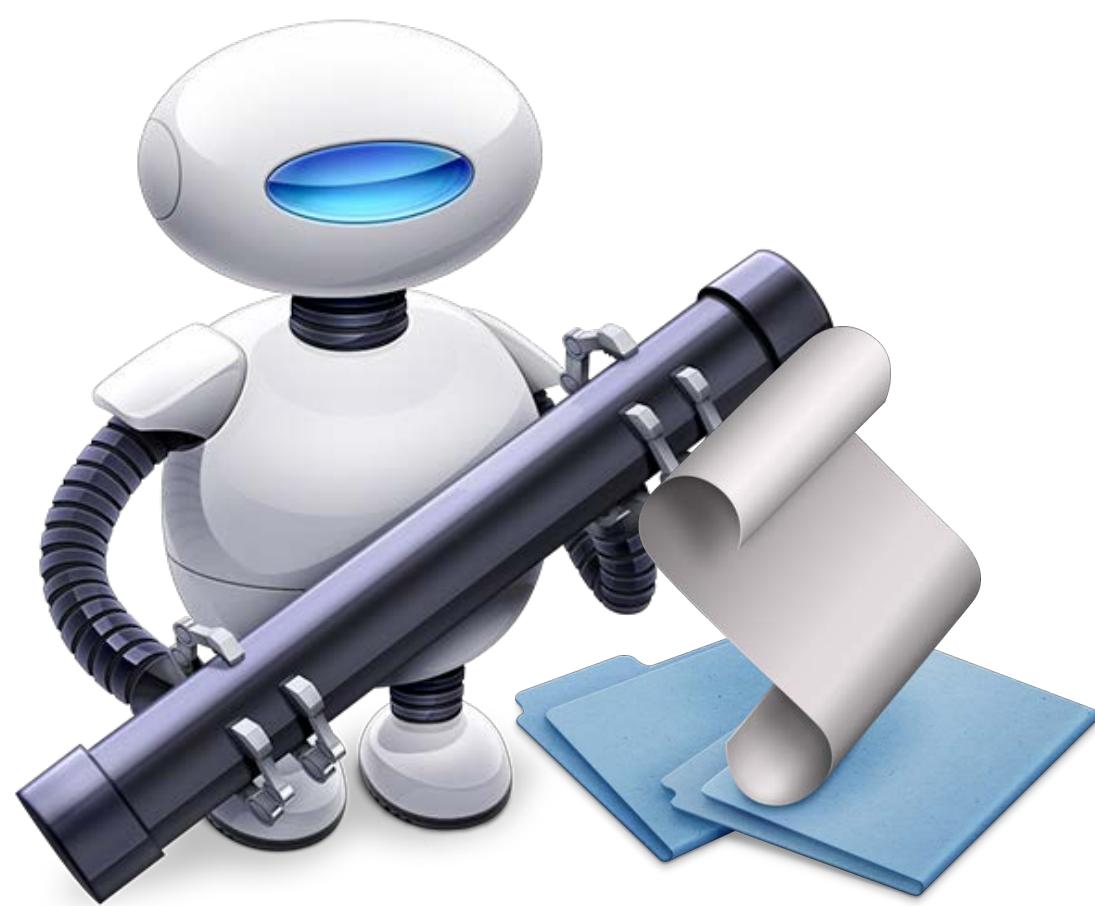




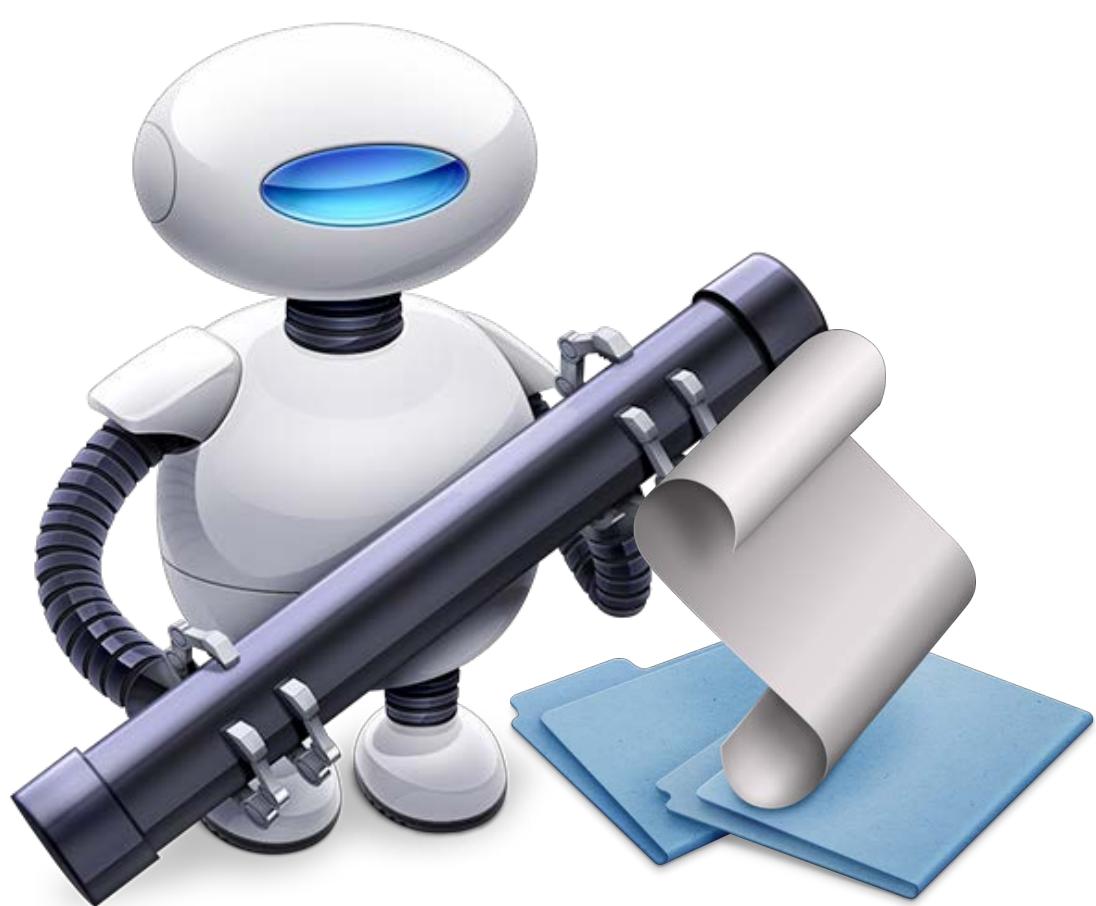




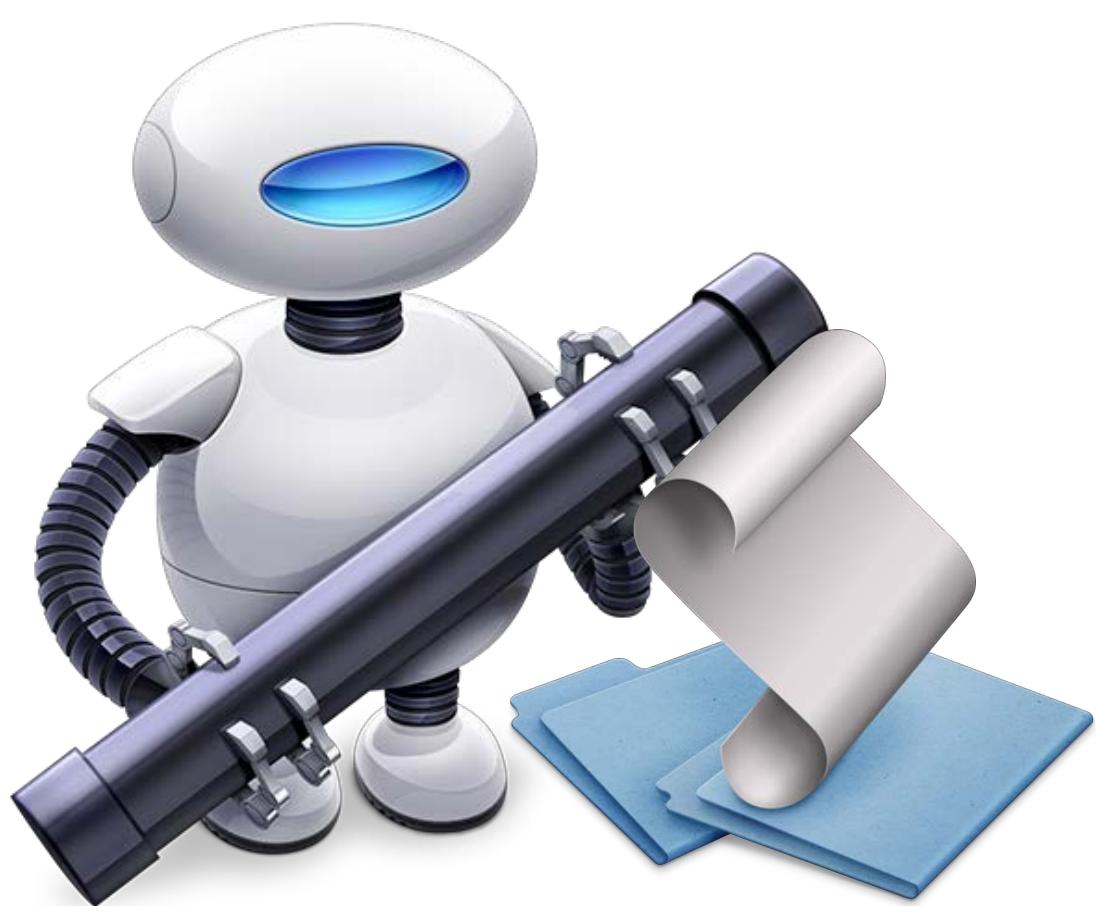
Automator and Folder Actions



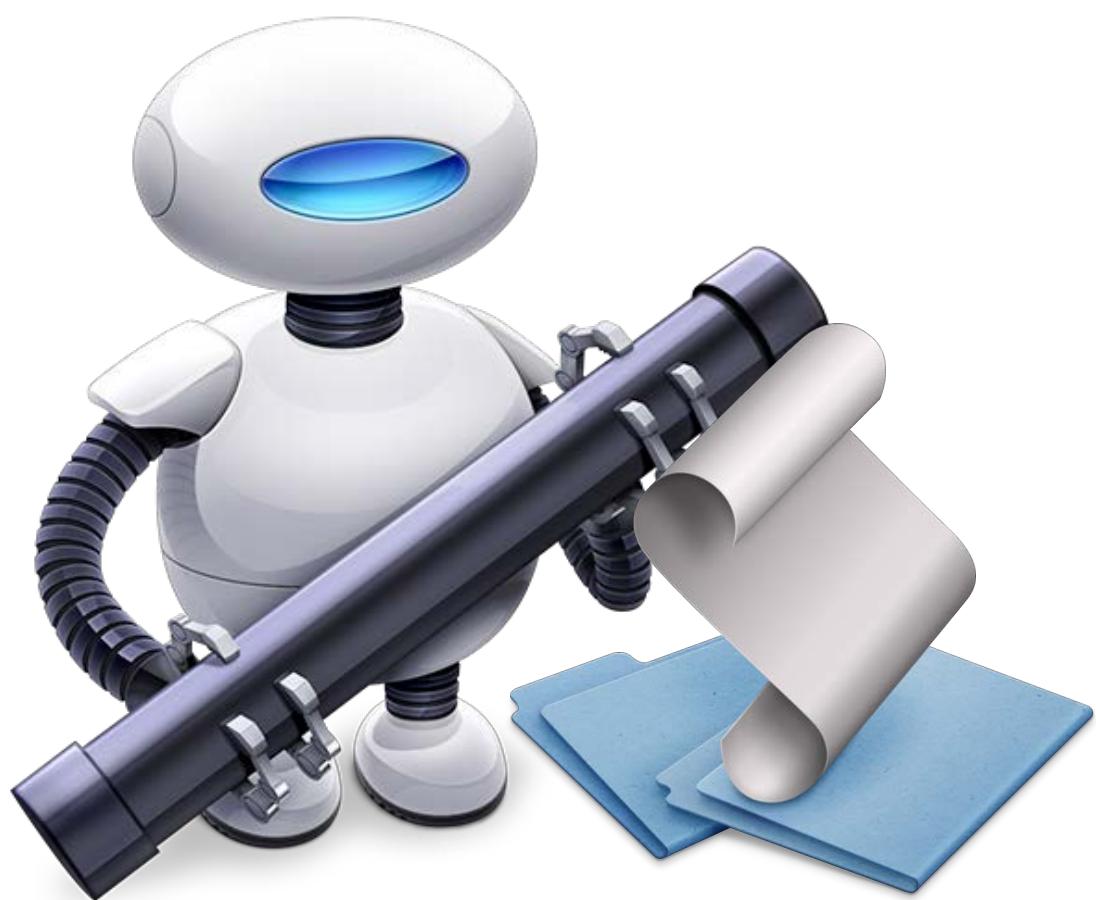
Automator and Folder Actions



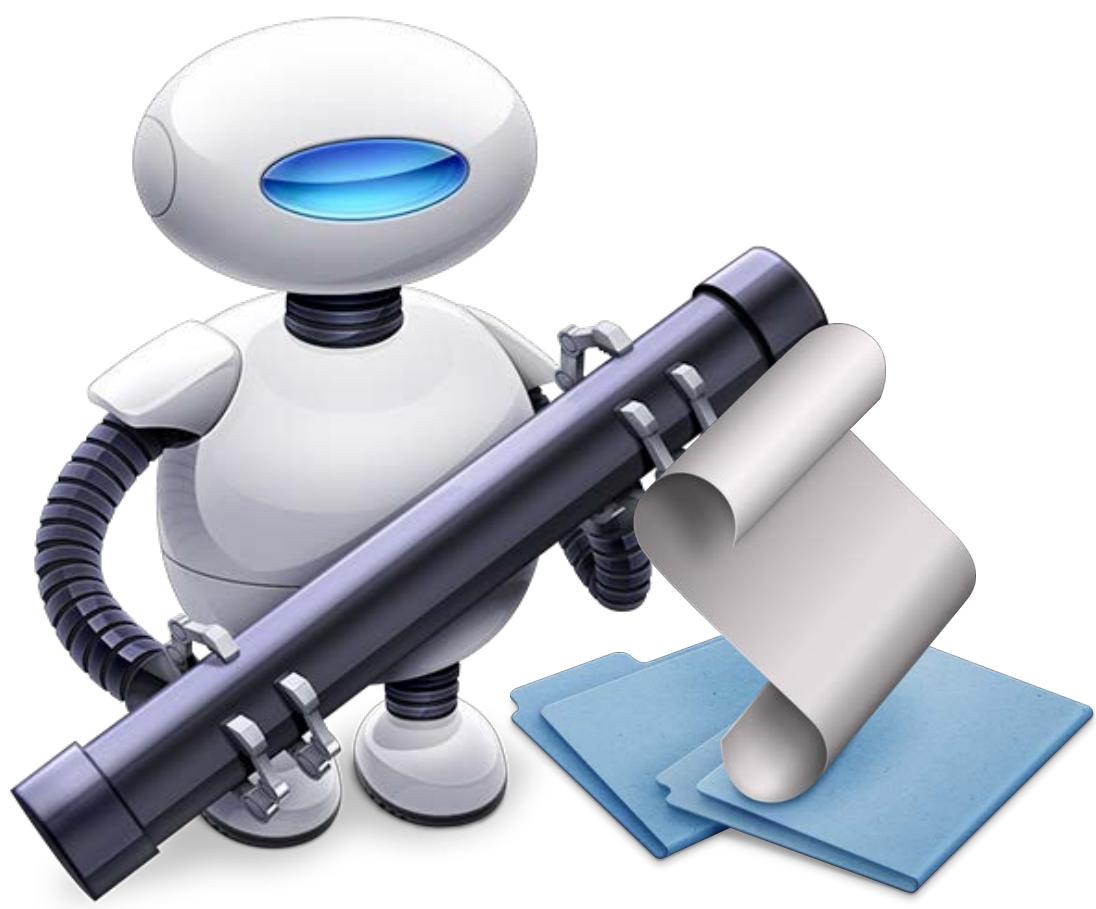
Automator and Folder Actions



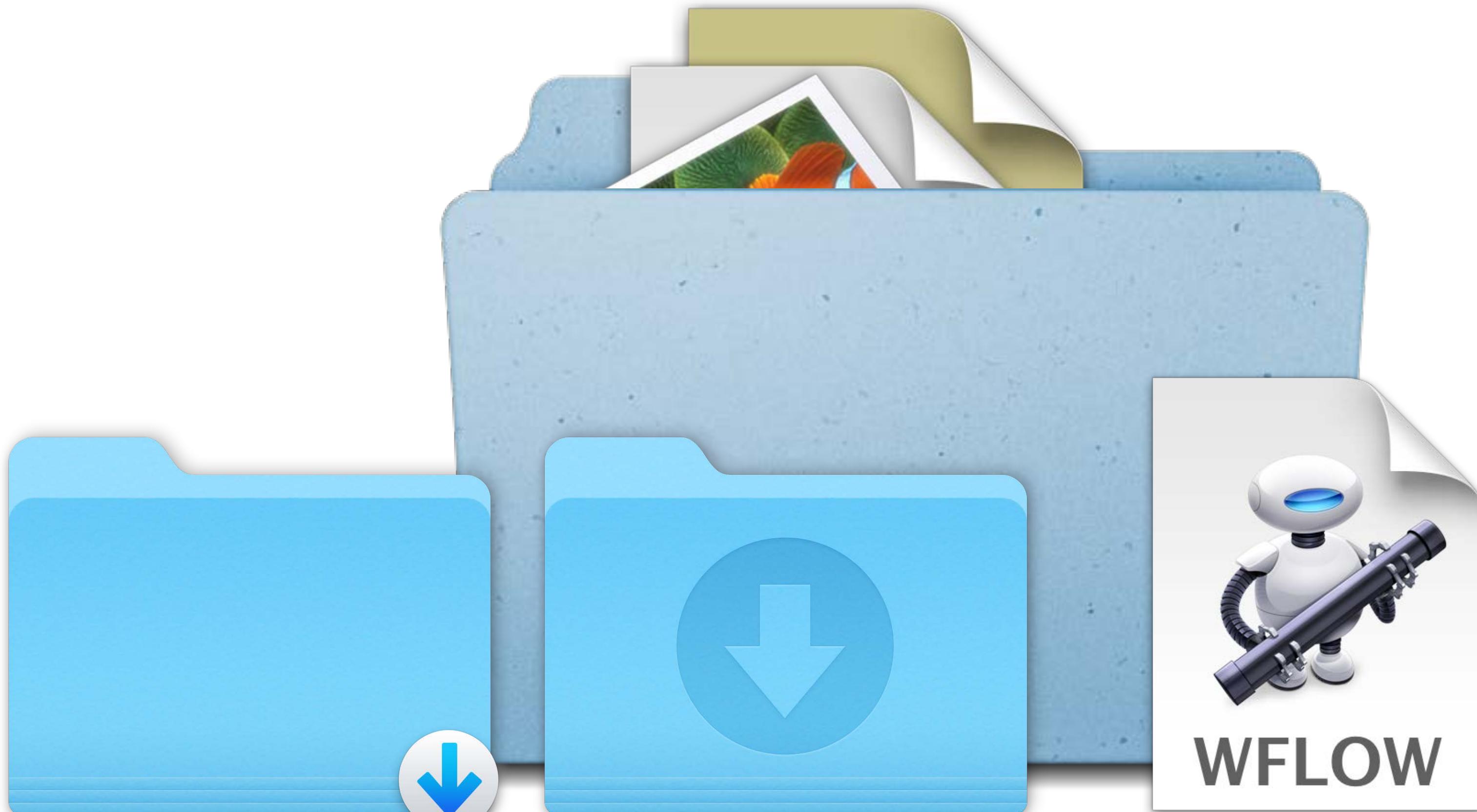
Automator and Folder Actions



Automator and Folder Actions



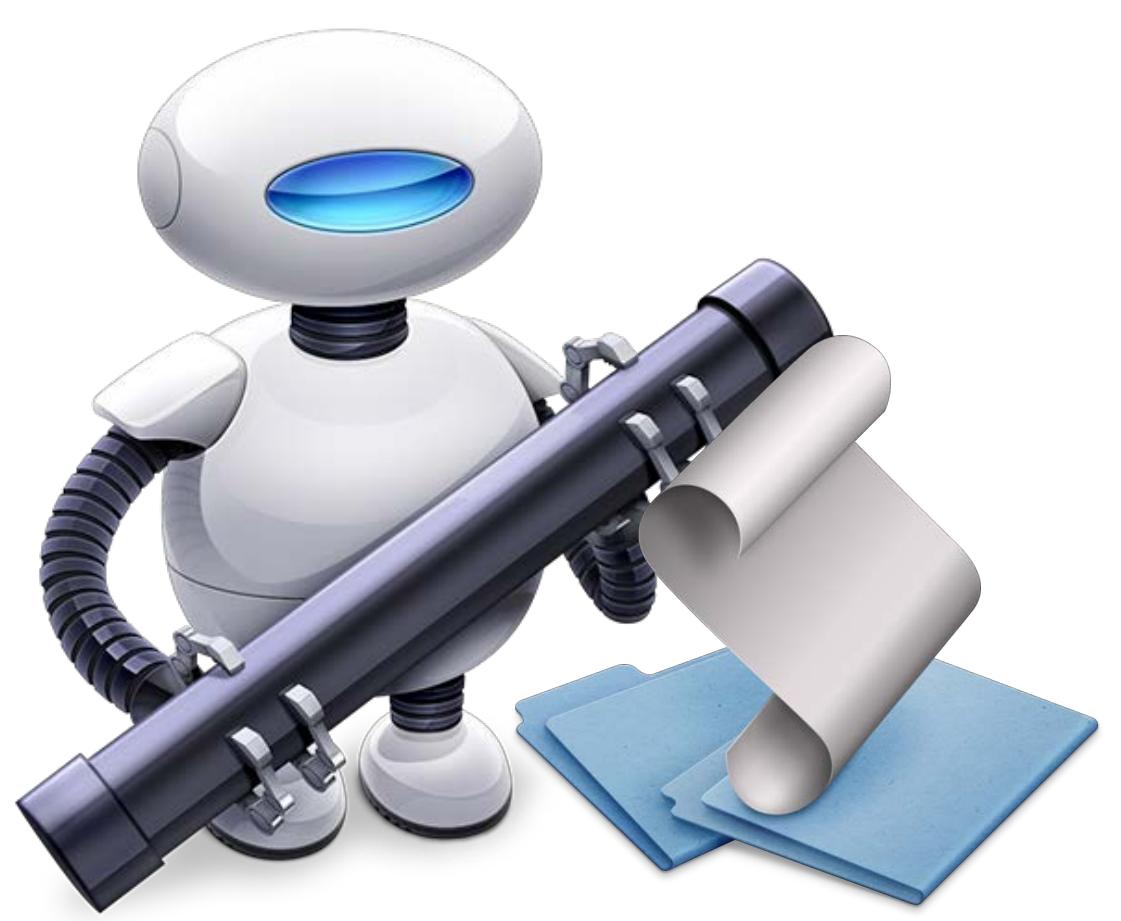
Automator and Folder Actions

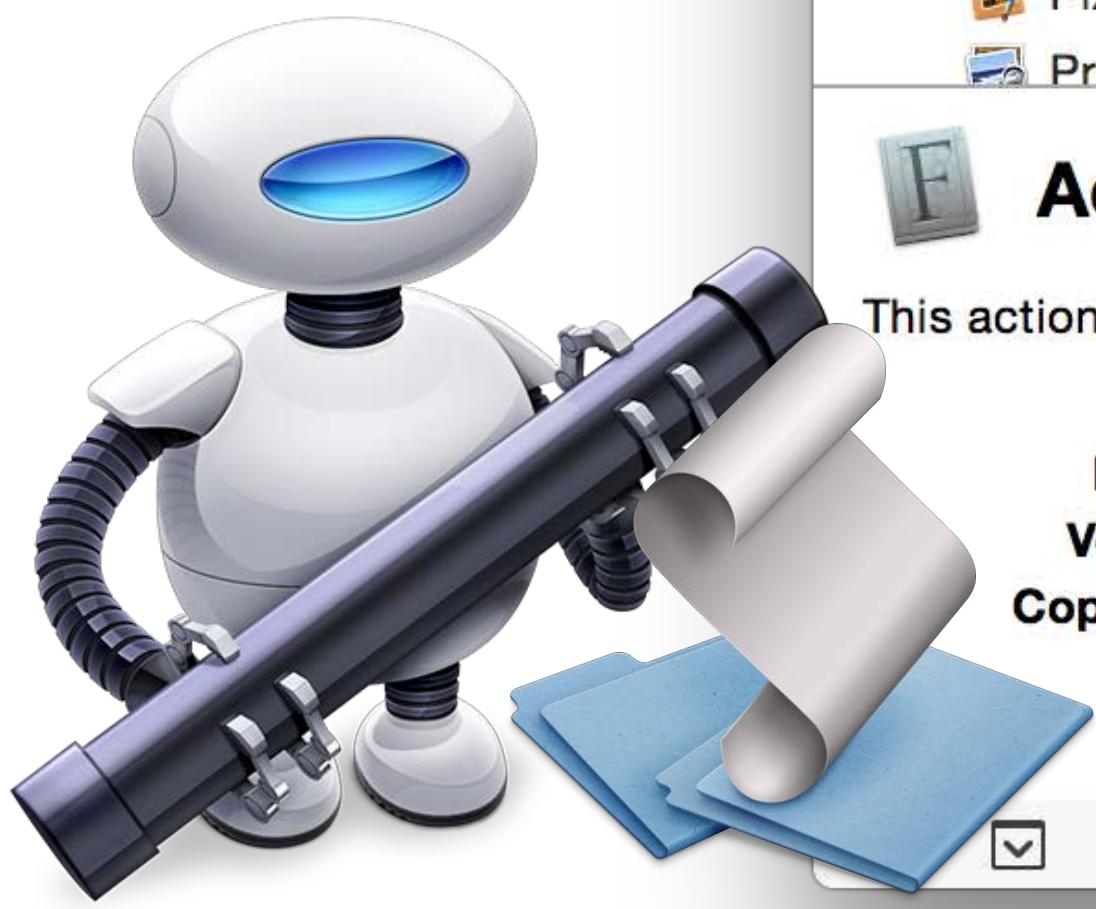


Drop Box

Downloads

WFLOW





Untitled

Record Step Stop Run

Actions Variables

Library

- Acorn
- Aperture
- Apple Configurator 2
- Automator
- Calendar
- Contacts
- Dictionary
- DVD Player
- Finder
- Font Book
- Image Capture
- iPhoto
- iTunes
- Keynote
- Mail
- PDF
- Photos
- Pixelmator
- Preview

Choose a type for your document:

| | | | |
|---------------|----------------|----------------------|-------------------|
| Workflow | Application | Service | Print Plugin |
| Folder Action | Calendar Alarm | Image Capture Plugin | Dictation Command |

Workflow

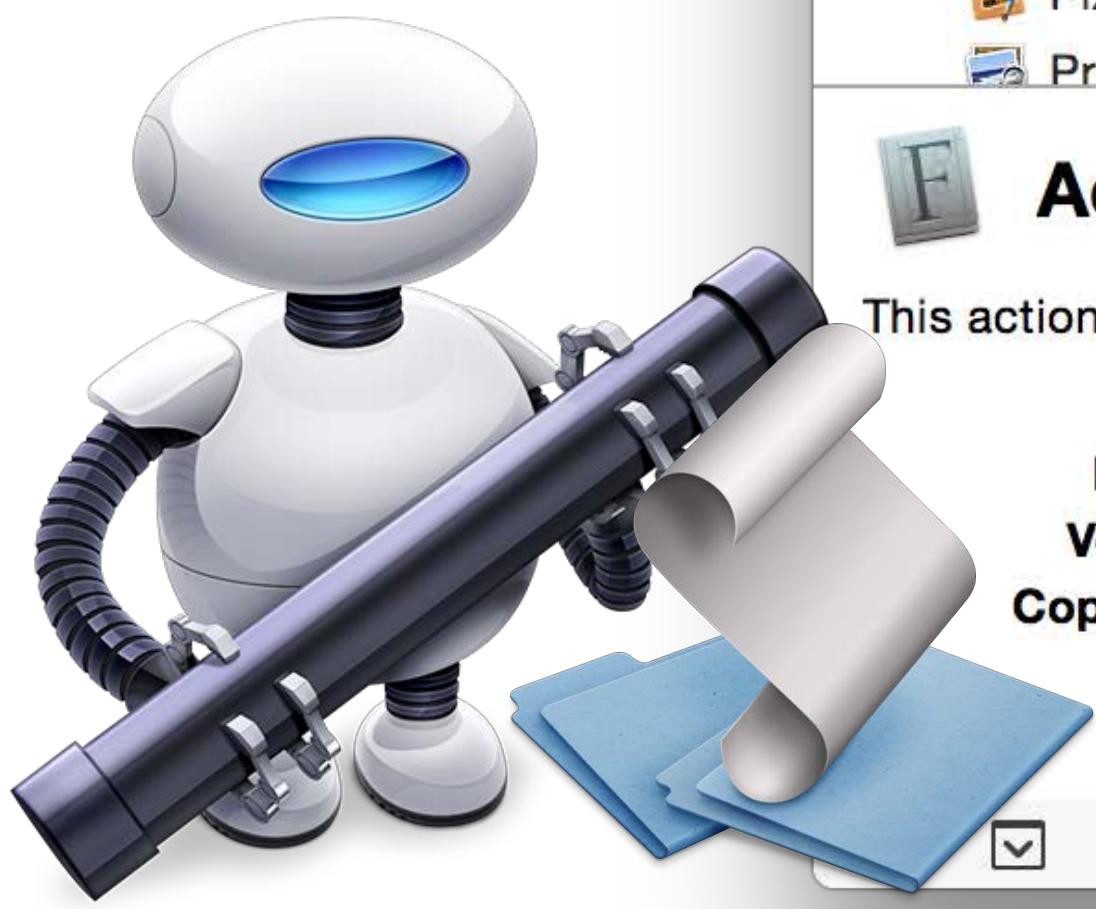
Workflows can be run from within Automator.

Activate Font

This action activates the font

Input: Font Book
Result: Font Book
Version: 5.0
Copyright: Copyright © 2004–2014 by Apple Inc. All rights reserved.

Open an Existing Document... Close Choose



Untitled

Record Step Stop Run

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Choose a type for your document:

Workflow Application Service Print Plugin

Folder Action Calendar Alarm Image Capture Plugin Dictation Command

Workflow

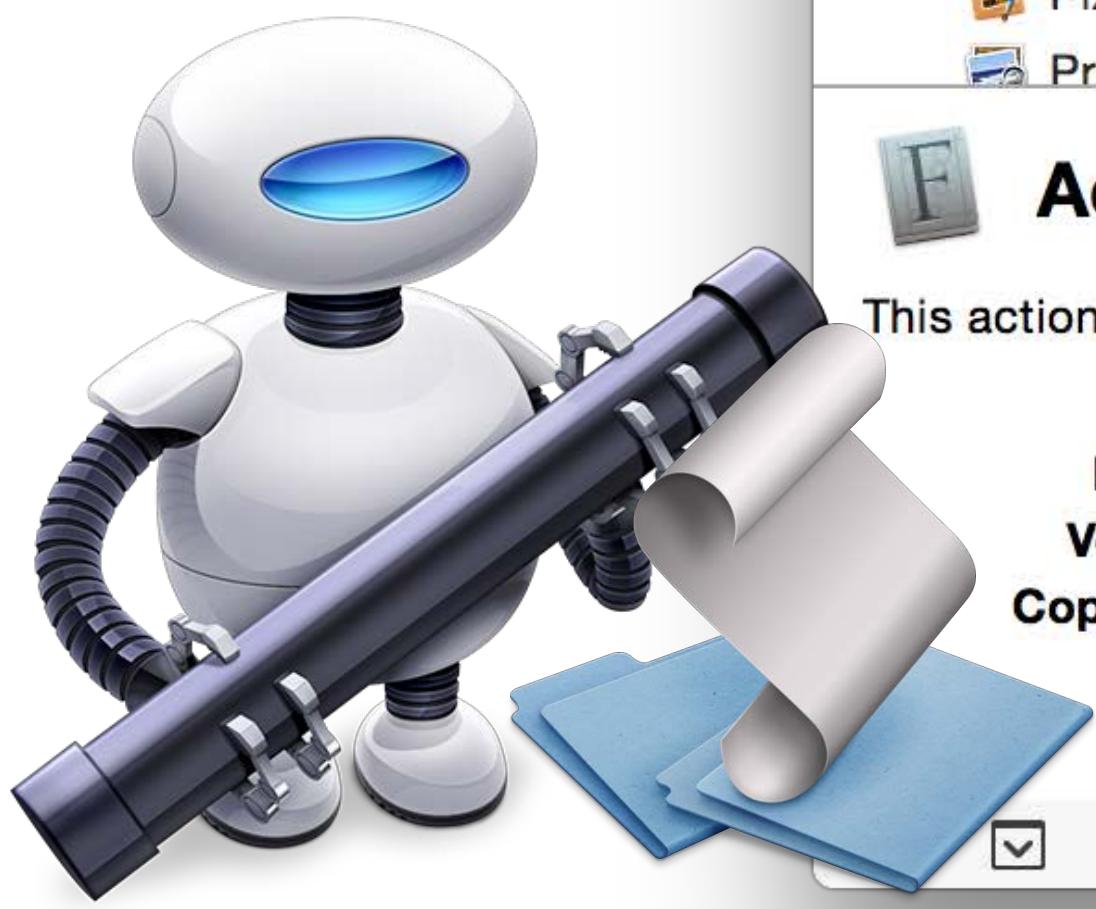
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Choose a type for your document:

Workflow Application Service Print Plugin

Folder Action Calendar Alarm Image Capture Plugin Dictation Command

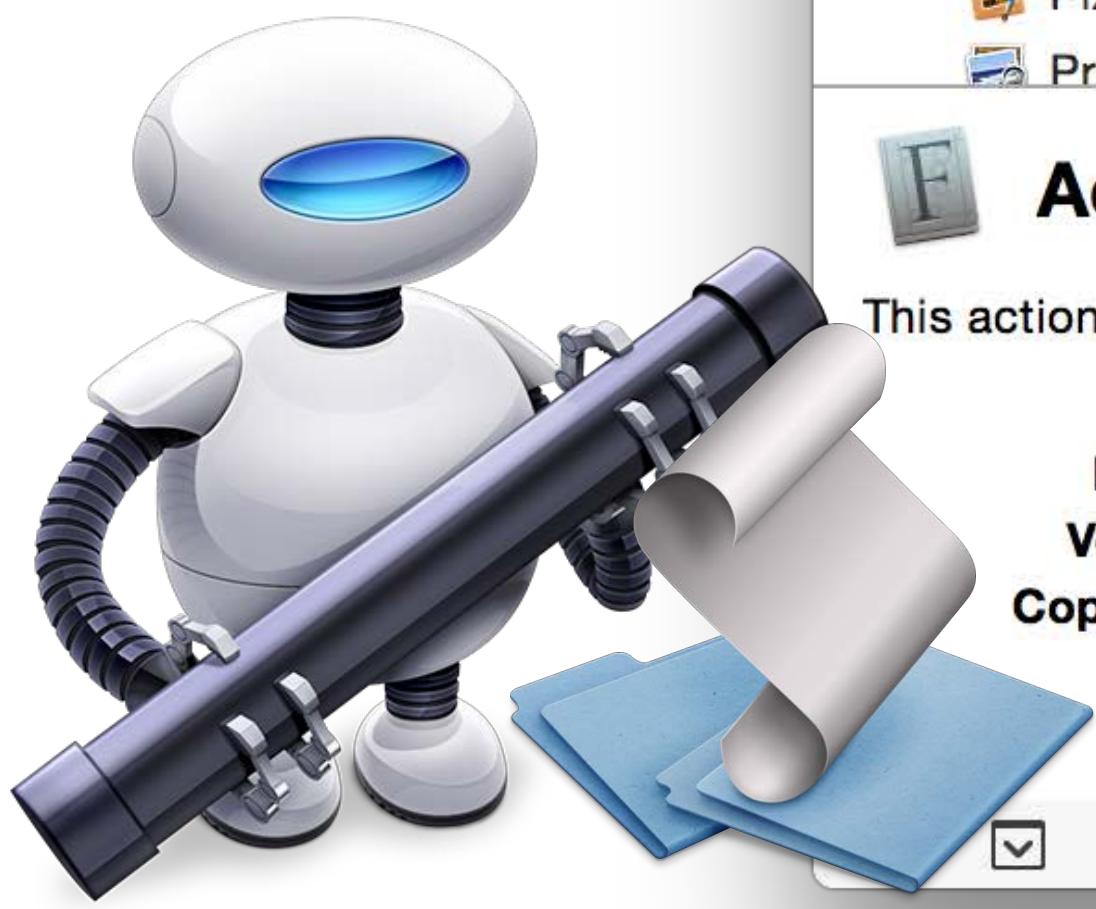
Folder Action

Folder Actions are workflows that are attached to a folder in the Finder. Items added to the folder cause the workflow to run and are used as input to the workflow.

Open an Existing Document... Close Choose

This action activates the font

Input: Font Book
Result: Font Book
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Copyright: Copyright © 2004–2014 by Apple Inc. All rights reserved.



Untitled

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Choose a type for your document:

WFLOW Workflow Application Service Print Plugin

Folder Action Calendar Alarm Image Capture Plugin Dictation Command

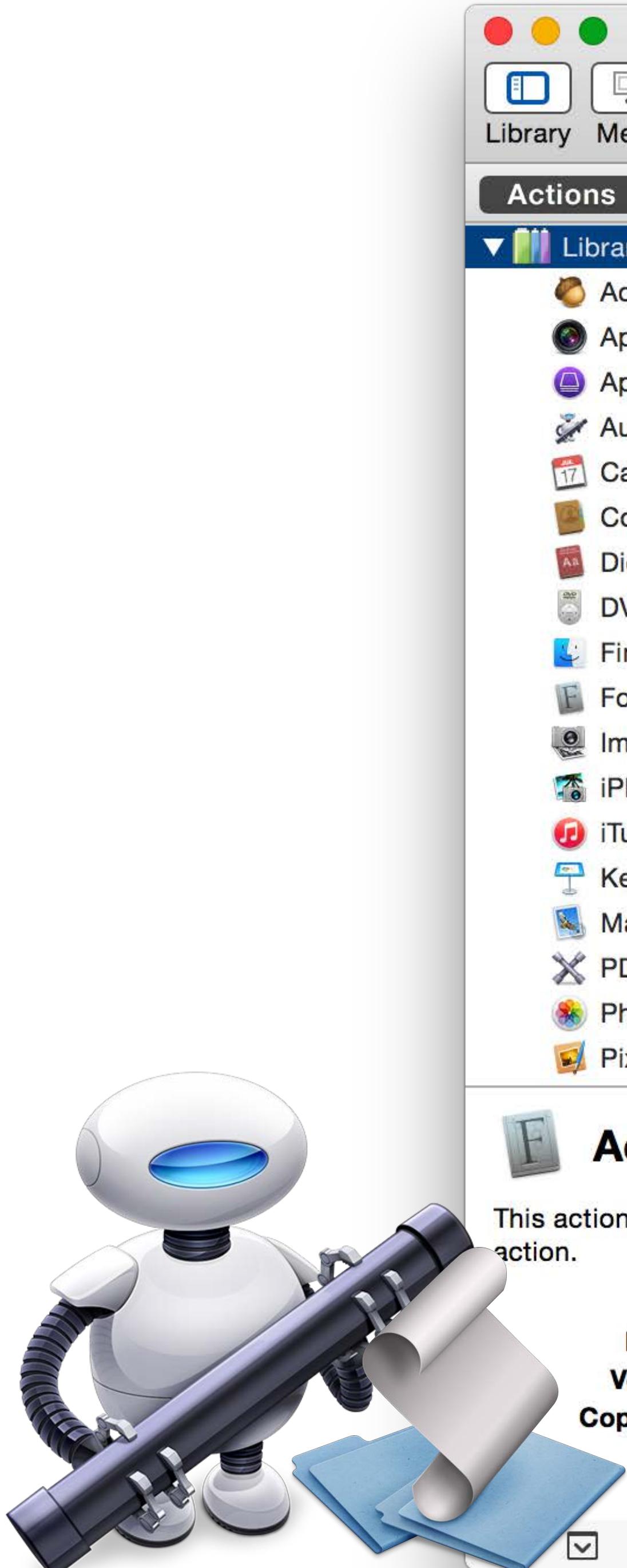
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Untitled — Edited

Record Step Stop Run

Actions Variables Q Name

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Activate Fonts Add Attachment Message Add Color Profile Add Configuration Profiles Add Grid to PDF Documents Add Package Install Scripts Add Photos to Album Add Prefix to Text Add Prefix to Text Paragraphs Add Songs to iPod Add Songs to Playlist Add Suffix to Text Add Suffix to Text Paragraphs Add Thumbnail Image Files Add to Album Add to Font Library Add User Account Apple Versioning Tool Apply ColorS file to Images

Folder Action receives files and folders added to Choose folder

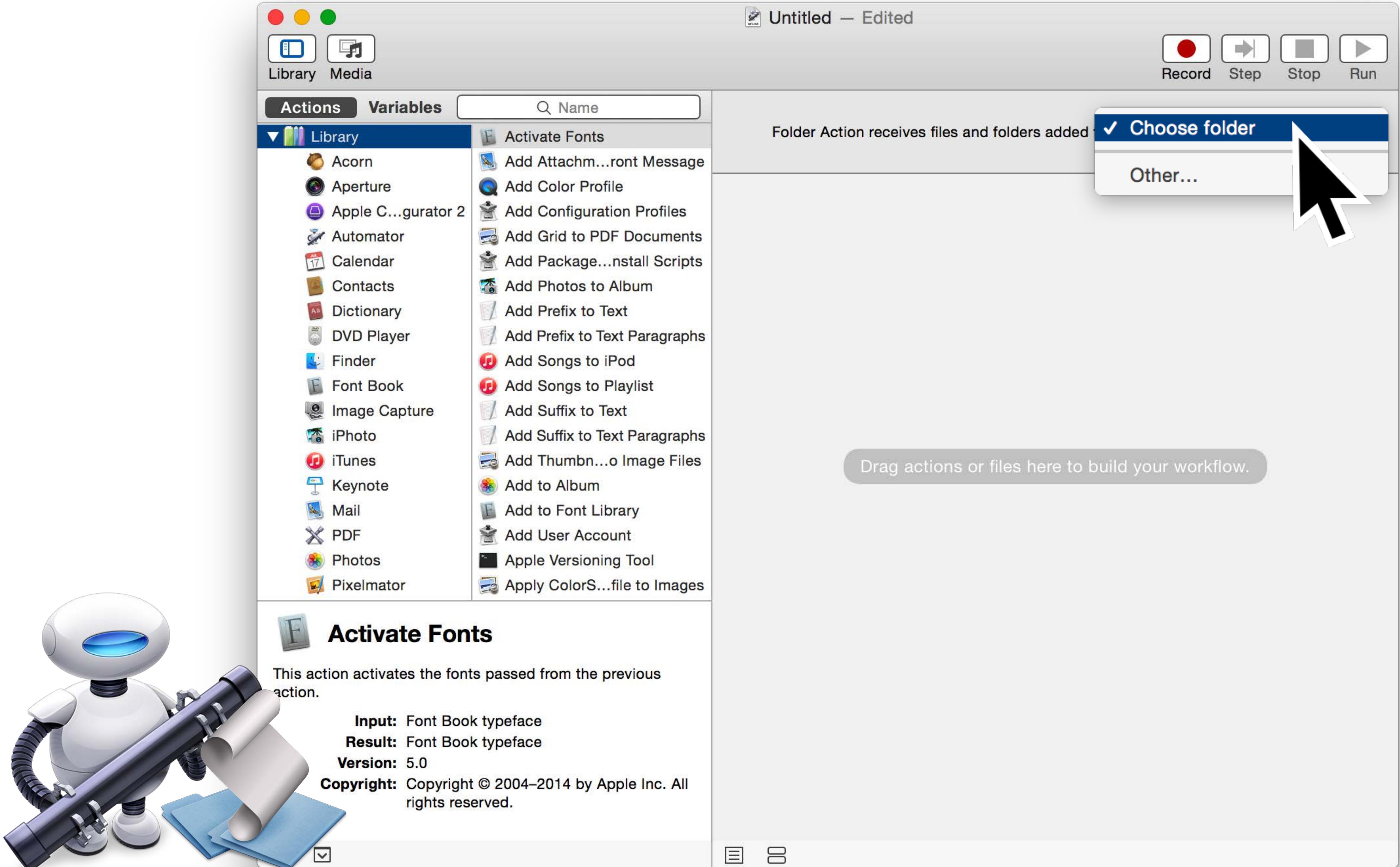
Drag actions or files here to build your workflow.

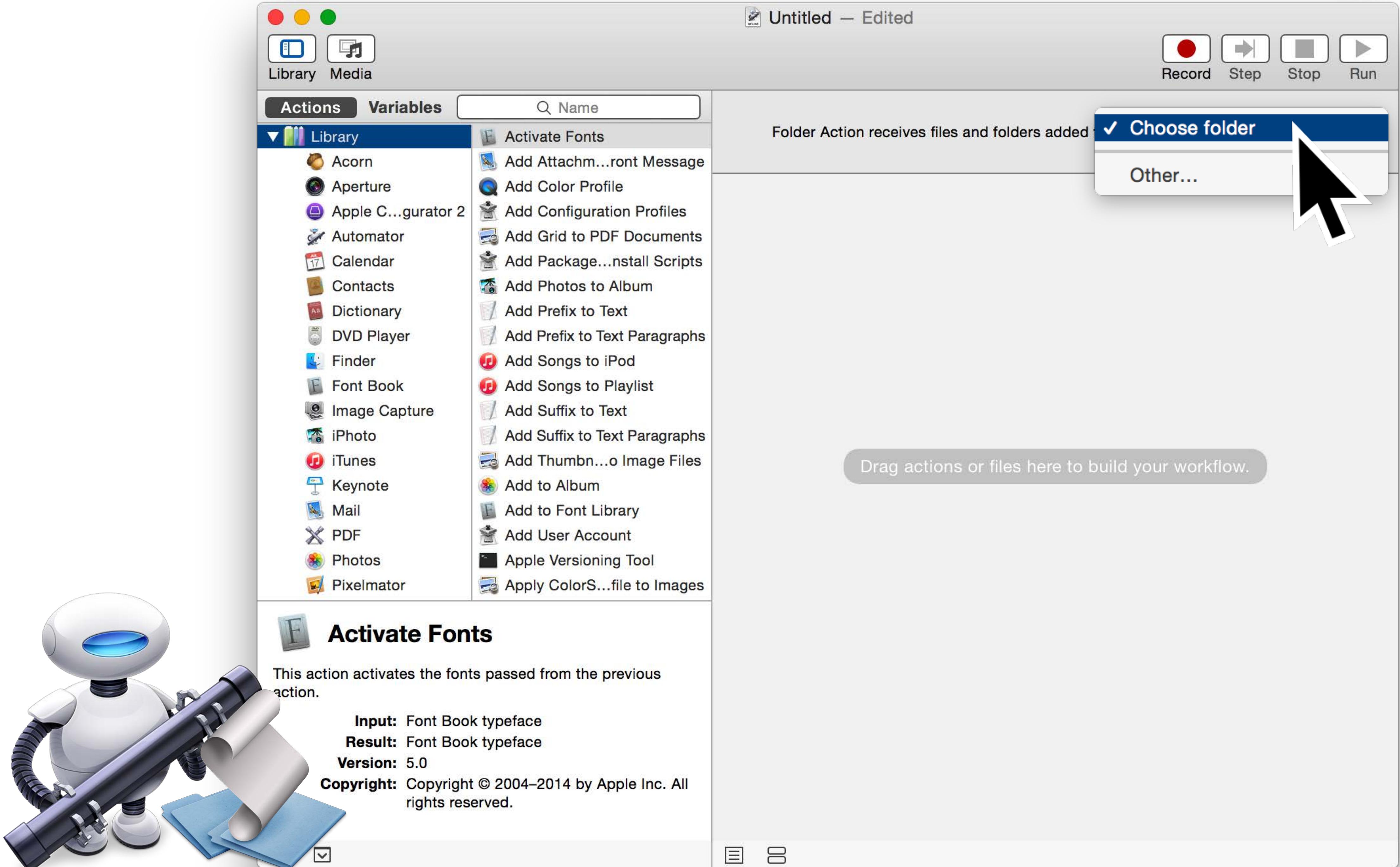
F Activate Fonts

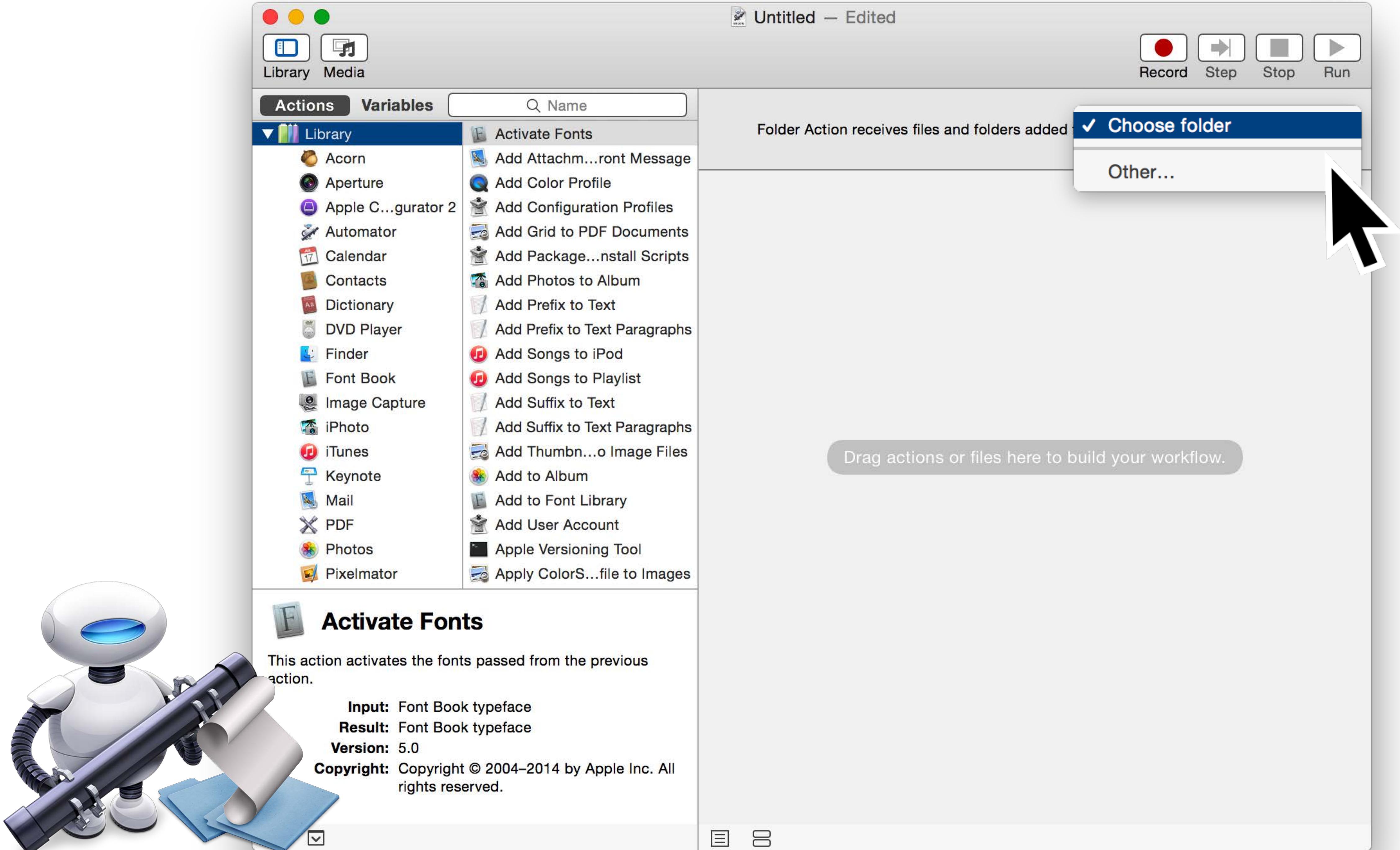
This action activates the fonts passed from the previous action.

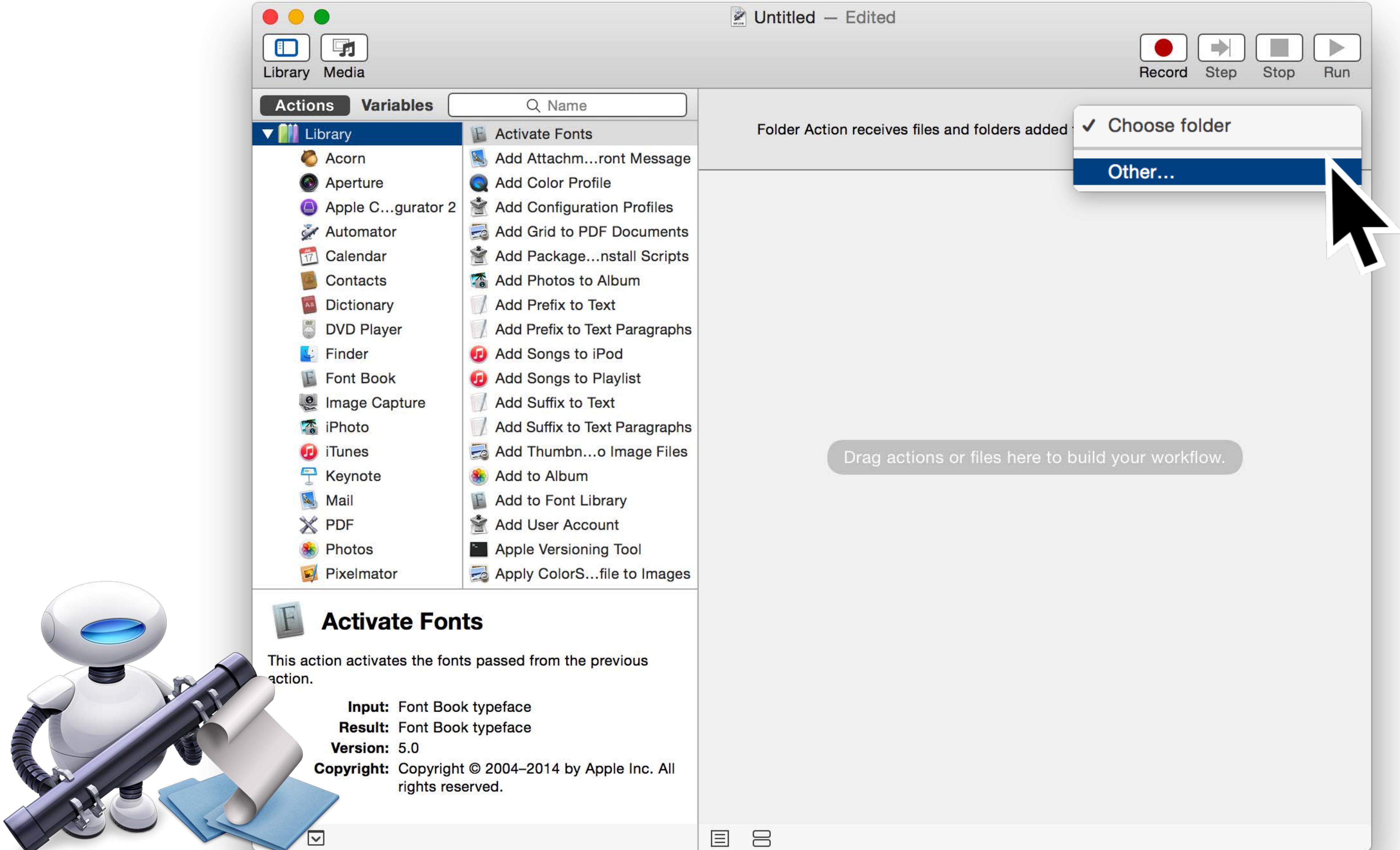
Input: Font Book typeface
Result: Font Book typeface
Version: 5.0
Copyright: Copyright © 2004–2014 by Apple Inc. All rights reserved.

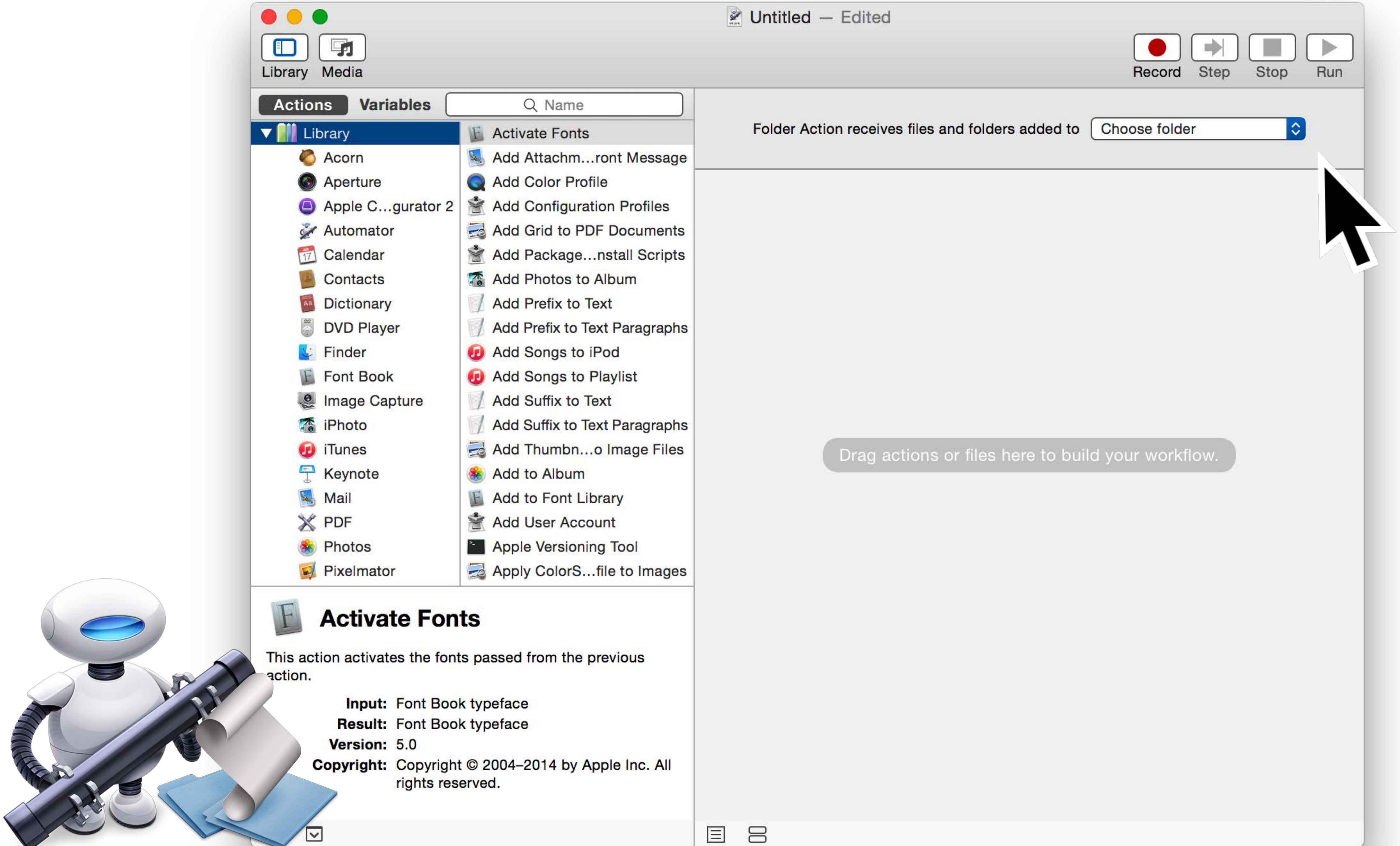














F Activate Fonts

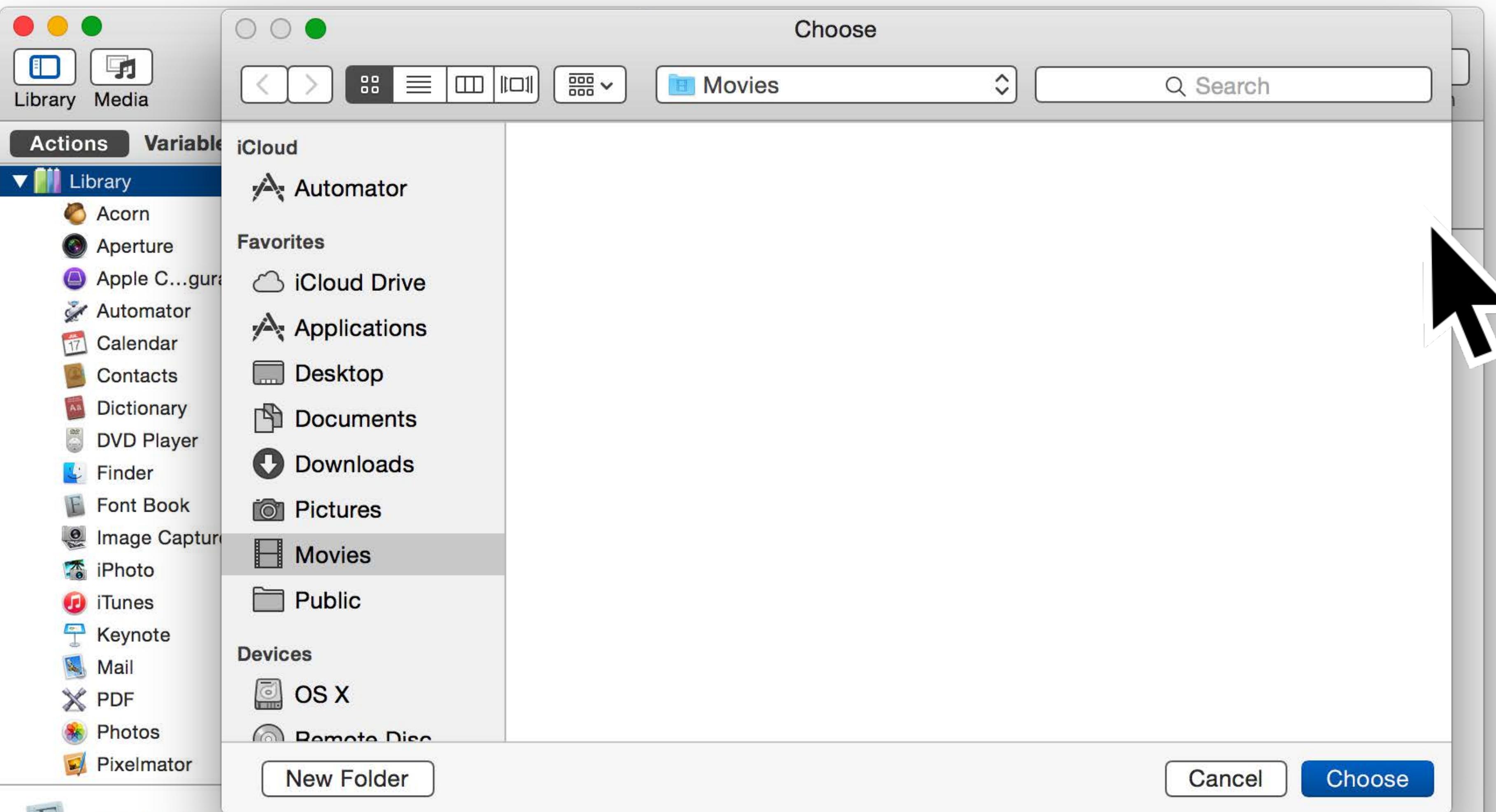
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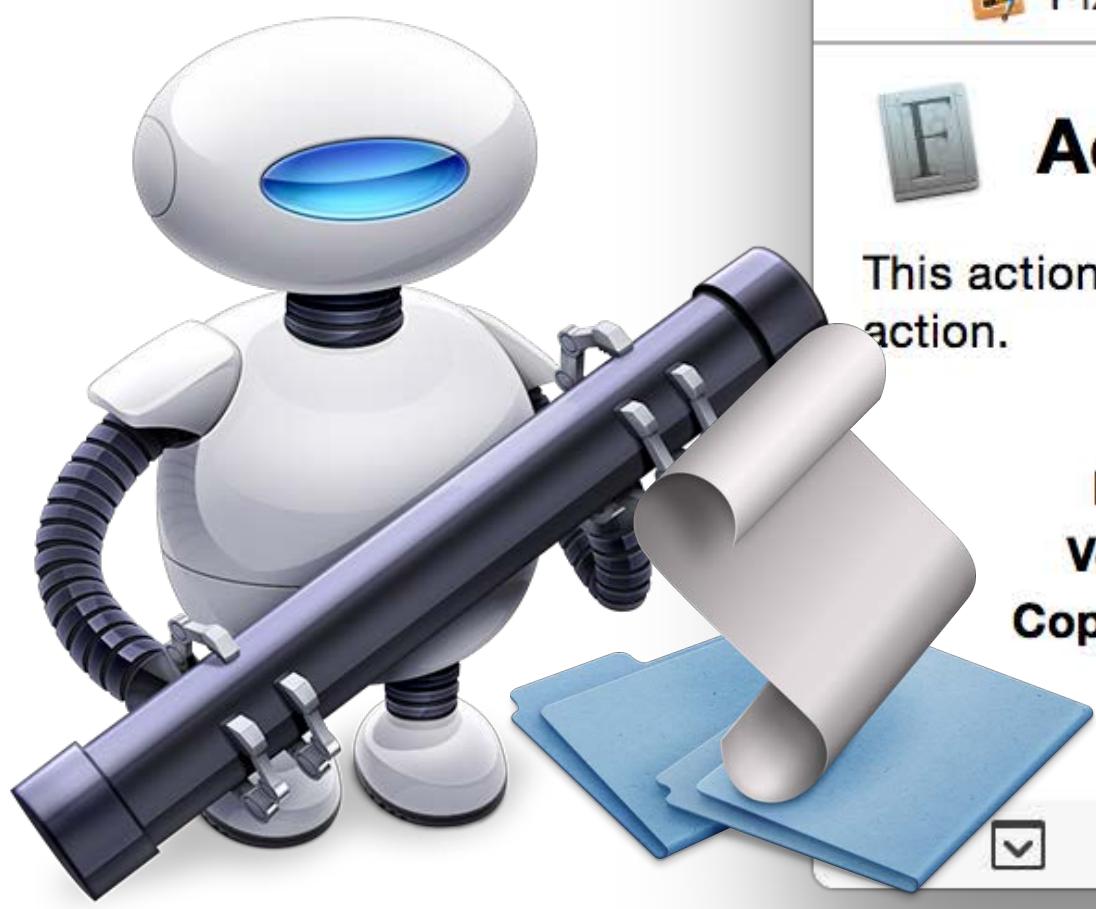
Input: Font Book typeface

Result: Font Book typeface

Version: 5.0

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F Activate Fonts

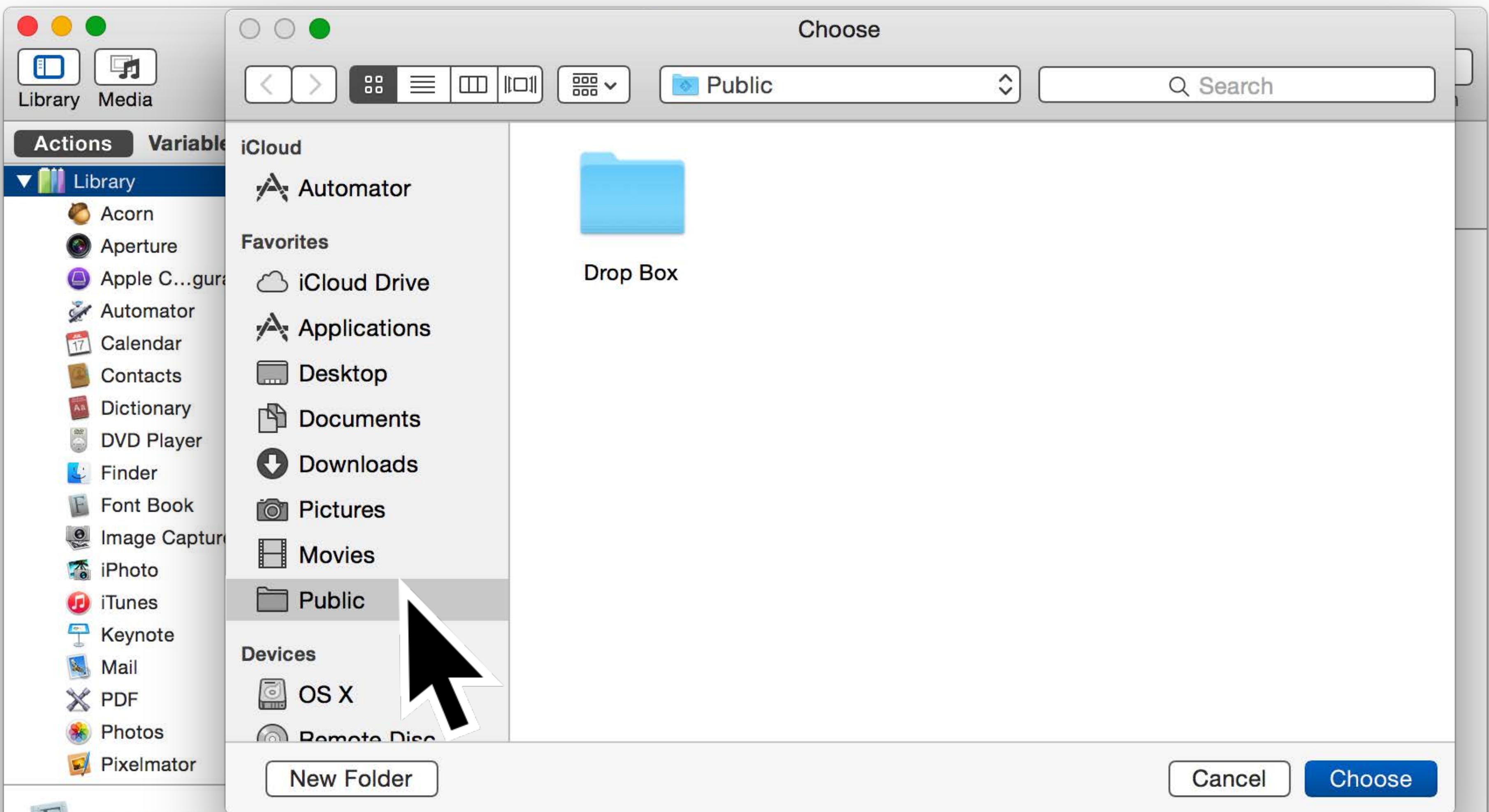
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Result: Font Book typeface

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Activate Fonts

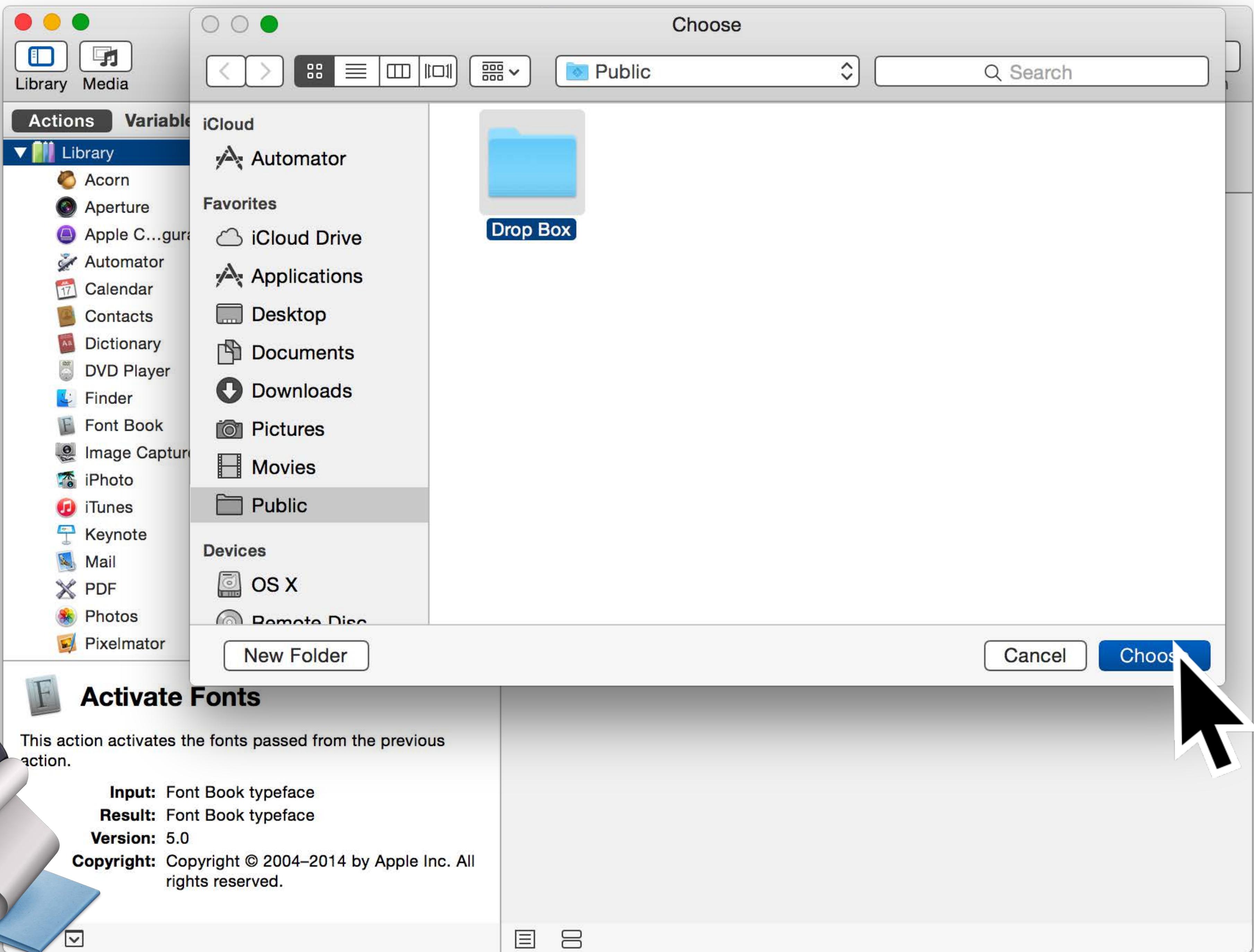
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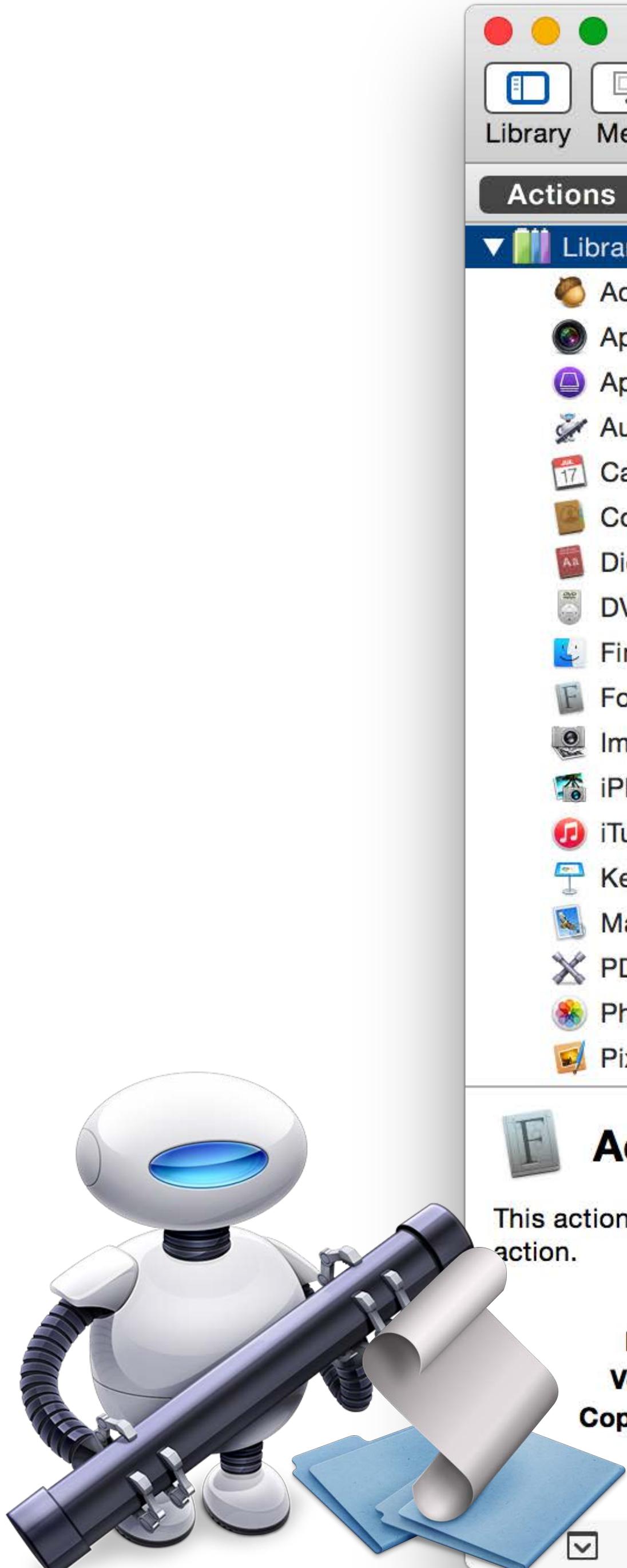
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- Photos
- Pixelmator

Activate Fonts

Add Attachment Message

Add Color Profile

Add Configuration Profiles

Add Grid to PDF Documents

Add Package Install Scripts

Add Photos to Album

Add Prefix to Text

Add Prefix to Text Paragraphs

Add Songs to iPod

Add Songs to Playlist

Add Suffix to Text

Add Suffix to Text Paragraphs

Add Thumbnail Image Files

Add to Album

Add to Font Library

Add User Account

Apple Versioning Tool

Apply ColorS...file to Images

Folder Action receives files and folders added to Drop Box

Drag actions or files here to build your workflow.

F Activate Fonts

This action activates the fonts passed from the previous action.

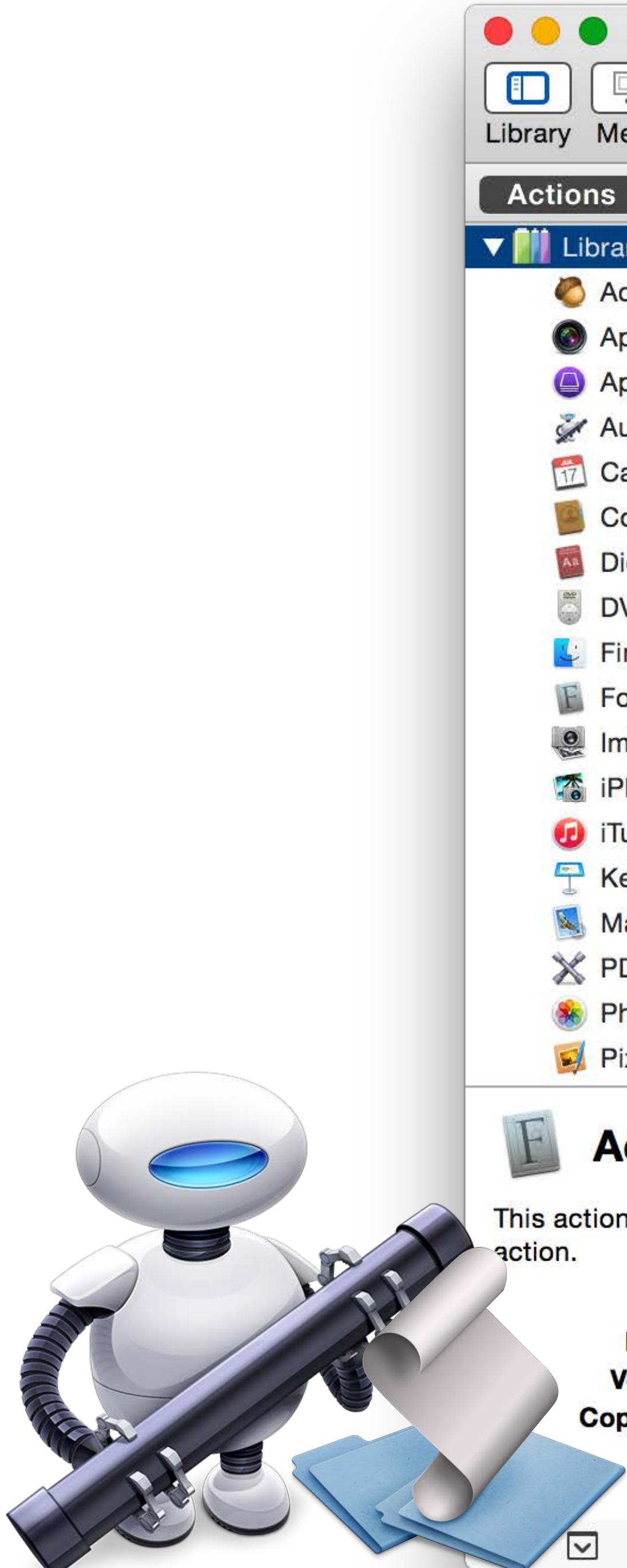
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- iTunes
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- Photos
- Pixelmator

Activate Fonts

Add Attachment Message

Add Color Profile

Add Configuration Profiles

Add Grid to PDF Documents

Add Package Install Scripts

Add Photos to Album

Add Prefix to Text

Add Prefix to Text Paragraphs

Add Songs to iPod

Add Songs to Playlist

Add Suffix to Text

Add Suffix to Text Paragraphs

Add Thumbnail Image Files

Add to Album

Add to Font Library

Add User Account

Apple Versioning Tool

Apply ColorS...file to Images

Folder Action receives files and folders added to Drop Box

Drag actions or files here to build your workflow.

F Activate Fonts

This action activates the fonts passed from the previous action.

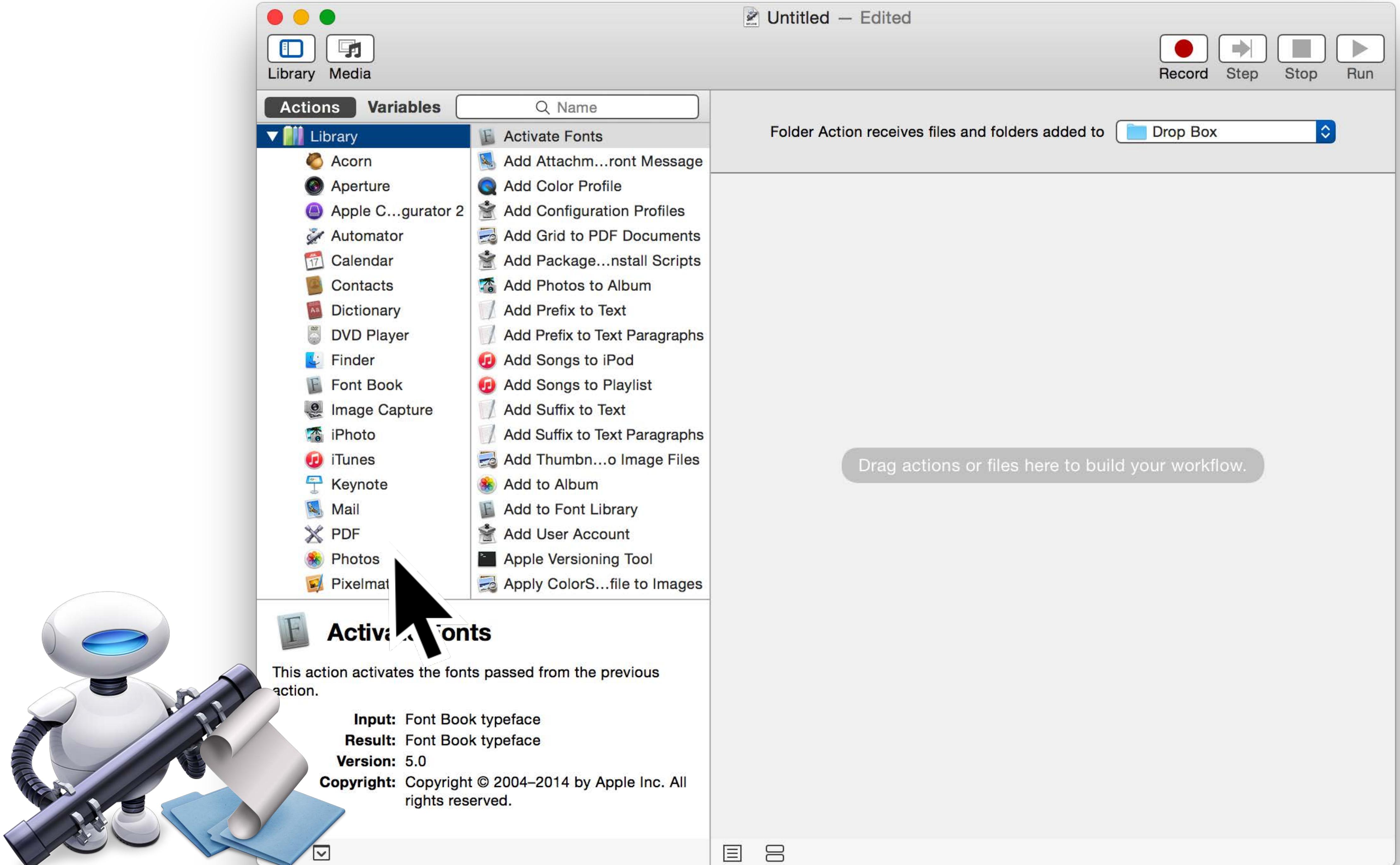
Input: Font Book typeface

Result: Font Book typeface

Version: 5.0

Copyright: Copyright © 2004–2014 by Apple Inc. All rights reserved.







Untitled — Edited

Record Step Stop Run

Actions Variables Q Name

Library Add to Album
Acorn Display Referenced Photo
Aperture Export Media Items
Apple Configurator 2 Export Media Items to Keynote
Automator Get Album by Name
Calendar Get Contents of Album
Contacts Get Contents of Import Album
Dictionary Get Selected Photos Items
DVD Player Import Files into Photos
Finder Play Narrated Slideshow
Font Book Show Location in Maps
Image Capture Slideshow Controller
iPhoto
iTunes
Keynote
Mail
PDF
Photos
Pixelmate

Folder Action receives files and folders added to Drop Box

Drag actions or files here to build your workflow.

Add to Album

This action will add media items, whose references are passed to this action as input, to the indicated album.

Input: Photos Media Item
Options: You can choose to add media items to either an existing top-level album, or a new top-level album.
Result: Photos Album
Version: 1
[Website: http://maccosyautomation.com/](http://maccosyautomation.com/)



Untitled — Edited

Record Step Stop Run

Actions Variables Q Name

Library Add to Album
Acorn Display Referenced Photo
Aperture Export Media Items
Apple Configurator 2 Export Media Items to Keynote
Automator Get Album by Name
Calendar Get Contents of Photos Album
Contacts Get Contents of Import Album
Dictionary Get Selected Photos Items
DVD Player Import Files to Photos
Finder Play Narrated Slideshow
Font Book Show Location
Image Capture Slideshow Controller
iPhoto
iTunes
Keynote
Mail
PDF
Photos Add to Album
Pixelmator

Folder Action receives files and folders added to Drop Box

Drag actions or files here to build your workflow.

Add to Album

This action will add media items, whose references are passed to this action as input, to the indicated album.

Input: Photos Media Item

Options: You can choose to add media items to either an existing top-level album, or a new top-level album.

Result: Photos Album

Version: 1

Website: <http://maschineautomation.com/>



Untitled — Edited

Record Step Stop Run

Library Media

Actions Variables Q Name

Library

- Acorn
- Aperture
- Apple Configurator 2
- Automator
- Calendar
- Contacts
- Dictionary
- DVD Player
- Finder
- Font Book
- Image Capture
- iPhoto
- iTunes
- Keynote
- Mail
- PDF
- Photos
- Pixelmator

Add to Album
Display Referenced Photo
Export Media Items
Export Media Items to Keynote
Get Album by Name
Get Contents of Photos Album
Get Contents of Import Album
Get Selected Photos Items
Import Files into Photos
Play Narration
Show Location
Slideshow Configuration

Folder Action receives files and folders added to Drop Box

Drag actions or files here to build your workflow.

Import Files into Photos

This action returns references to the media items imported into the Photos application.

Input: (Files/Folders) Image files

Options: Action options include:

- 1) Importing into an existing top-level album; a new album; or into the default library.
- 2) The option to delete the source files upon completion of import.



Untitled — Edited

Record Step Stop Run

Library Media

Actions Variables Q Name

Library

- Acorn
- Aperture
- Apple Configurator 2
- Automator
- Calendar
- Contacts
- Dictionary
- DVD Player
- Finder
- Font Book
- Image Capture
- iPhoto
- iTunes
- Keynote
- Mail
- PDF
- Photos
- Pixelmator

Add to Album
Display Referenced Photo
Export Media Items
Export Media Items to Keynote
Get Album by Name
Get Contents of Photos Album
Get Contents of Import Album
Get Selected Photos Items
Import Files into Photos
Play Narrated Slideshow
Show Location in Maps
Slideshow Controller

Folder Action receives files and folders added to Drop Box

Drag actions or files here to build your workflow.

Import Files into Photos

This action returns references to the media items imported into the Photos application.

Input: (Files/Folders) Image files

Options: Action options include:

- 1) Importing into an existing top-level album; a new album; or into the default library.
- 2) The option to delete the source files upon completion of import.



Untitled — Edited

Record Step Stop Run

Library Media

Actions Variables Q Name

Library

- Acorn
- Aperture
- Apple Configurator 2
- Automator
- Calendar
- Contacts
- Dictionary
- DVD Player
- Finder
- Font Book
- Image Capture
- iPhoto
- iTunes
- Keynote
- Mail
- PDF
- Photos
- Pixelmator

Add to Album
Display Referenced Photo
Export Media Items
Export Media Items to Keynote
Get Album by Name
Get Contents of References Album
Get Contents of Import Album
Get Selected Photos Items
Import Files into Photos
Play Narrated Slideshow
Show Location in Maps
Slideshow Controller

Folder Action receives files and folders added to Drop Box

Import Files into Photos

Drag actions or files here to build your workflow.

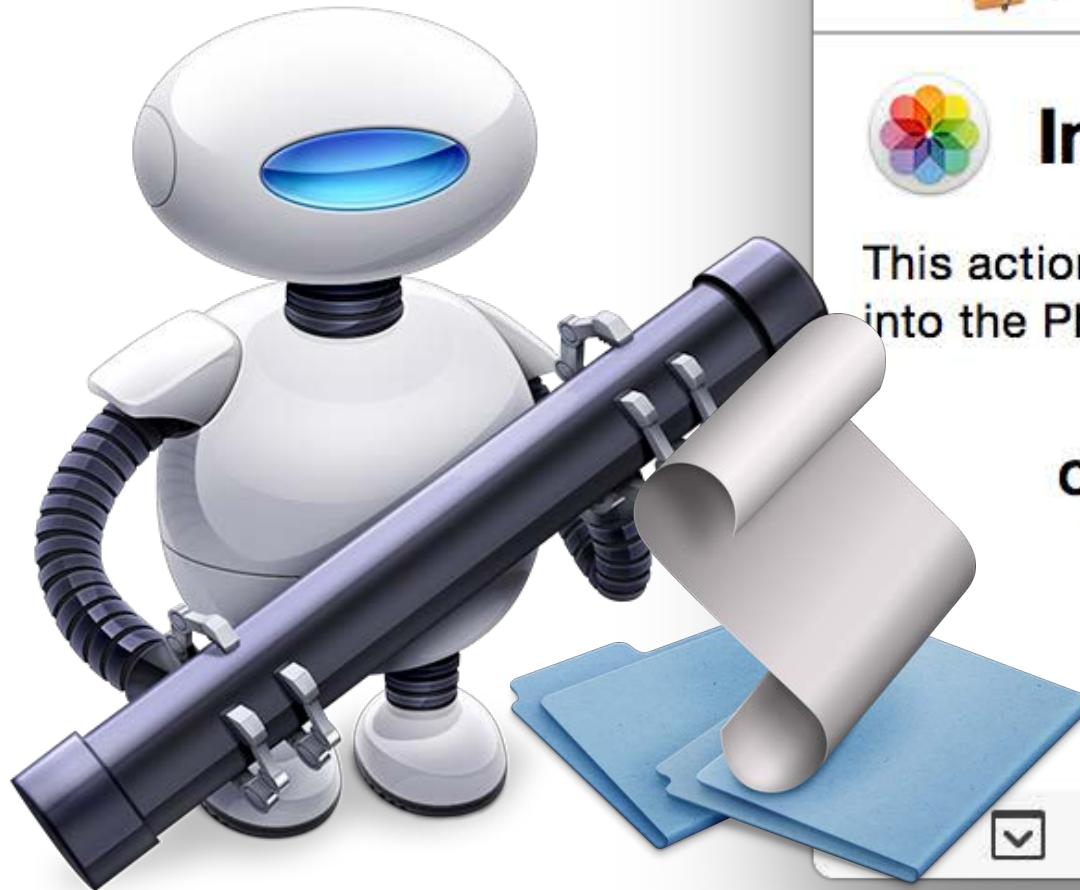
Import Files into Photos

This action returns references to the media items imported into the Photos application.

Input: (Files/Folders) Image files

Options: Action options include:

- 1) Importing into an existing top-level album; a new album; or into the default library.
- 2) The option to delete the source files upon completion of import.



Untitled — Edited

Record Step Stop Run

Library Media

Actions Variables Q Name

Library

- Acorn
- Aperture
- Apple Configurator 2
- Automator
- Calendar
- Contacts
- Dictionary
- DVD Player
- Finder
- Font Book
- Image Capture
- iPhoto
- iTunes
- Keynote
- Mail
- PDF
- Photos
- Pixelmator

Add to Album

Display Referenced Photo

Export Media Items

Export Media Items to Keynote

Get Album by Name

Get Contents of References Album

Get Contents of Import Album

Get Selected Photos Items

Import Files into Photos

Play Narrated Slideshow

Show Location in Maps

Slideshow Controller

Folder Action receives files and folders added to Drop Box

Import Files into Photos

Import without adding to album

Skip checking for duplicates

Move source files to trash after import completion

Results Options

Import Files into Photos

This action returns references to the media items imported into the Photos application.

Input: (Files/Folders) Image files

Options: Action options include:

- 1) Importing into an existing top-level album; a new album; or into the default library.
- 2) The option to delete the source files upon completion of import.



Untitled — Edited

Record Step Stop Run

Library Media

Actions Variables Q Name

Library

- Acorn
- Aperture
- Apple Configurator 2
- Automator
- Calendar
- Contacts
- Dictionary
- DVD Player
- Finder
- Font Book
- Image Capture
- iPhoto
- iTunes
- Keynote
- Mail
- PDF
- Photos
- Pixelmator

Add to Album

Display Referenced Photo

Export Media Items

Export Media Items to Keynote

Get Album by Name

Get Contents of References Album

Get Contents of Import Album

Get Selected Photos Items

Import Files into Photos

Play Narrated Slideshow

Show Location in Maps

Slideshow Controller

Folder Action receives files and folders added to Drop Box

Import Files into Photos

Import without adding to album

Skip checking for duplicates

Move source files to trash after import completion

Results Options

Import Files into Photos

This action returns references to the media items imported into the Photos application.

Input: (Files/Folders) Image files

Options: Action options include:

- 1) Importing into an existing top-level album; a new album; or into the default library.
- 2) The option to delete the source files upon completion of import.



Untitled — Edited

Record Step Stop Run

Library Media

Actions Variables Q Name

Library

- Acorn
- Aperture
- Apple Configurator 2
- Automator
- Calendar
- Contacts
- Dictionary
- DVD Player
- Finder
- Font Book
- Image Capture
- iPhoto
- iTunes
- Keynote
- Mail
- PDF
- Photos
- Pixelmator

Add to Album

Display Referenced Photo

Export Media Items

Export Media Items to Keynote

Get Album by Name

Get Contents of References Album

Get Contents of Import Album

Get Selected Photos Items

Import Files into Photos

Play Narrated Slideshow

Show Location in Maps

Slideshow Controller

Folder Action receives files and folders added to Drop Box

Import Files into Photos

Import without adding to album

Skip checking for duplicates

Move source files to trash after import completion

Results Options

Import Files into Photos

This action returns references to the media items imported into the Photos application.

Input: (Files/Folders) Image files

Options: Action options include:

- 1) Importing into an existing top-level album; a new album; or into the default library.
- 2) The option to delete the source files upon completion of import.



Untitled — Edited

Record Step Stop Run

Actions Variables

Save folder action as: Untitled

Cancel Save

Drop Box

Import without adding to album

Skip checking for duplicates

Move source files to trash after import completion

Results Options

Library

- Acorn
- Aperture
- Apple C...gurator 2
- Automator
- Calendar
- Contacts
- Dictionary
- DVD Player
- Finder
- Font Book
- Image Capture
- iPhoto
- iTunes
- Keynote
- Mail
- PDF
- Photos
- Pixelmator

Import Files into Photos

This action returns references to the media items imported into the Photos application.

Input: (Files/Folders) Image files

Options: Action options include:

- 1) Importing into an existing top-level album; a new album; or into the default library.
- 2) The option to delete the source files upon completion of import.



Untitled — Edited

Record Step Stop Run

Actions Variables

Save folder action as: Import from Drop Box

Cancel Save

Drop Box

Import without adding to album

Skip checking for duplicates

Move source files to trash after import completion

Results Options

Library

- Acorn
- Aperture
- Apple C...gurator 2
- Automator
- Calendar
- Contacts
- Dictionary
- DVD Player
- Finder
- Font Book
- Image Capture
- iPhoto
- iTunes
- Keynote
- Mail
- PDF
- Photos
- Pixelmator

Import Files into Photos

This action returns references to the media items imported into the Photos application.

Input: (Files/Folders) Image files

Options: Action options include:

- 1) Importing into an existing top-level album; a new album; or into the default library.
- 2) The option to delete the source files upon completion of import.



Untitled — Edited

Record Step Stop Run

Actions Variables

Save folder action as: Import from Drop Box

Cancel Save

Drop Box

Import without adding to album

Skip checking for duplicates

Move source files to trash after import completion

Results Options

Library

- Acorn
- Aperture
- Apple C...gurator 2
- Automator
- Calendar
- Contacts
- Dictionary
- DVD Player
- Finder
- Font Book
- Image Capture
- iPhoto
- iTunes
- Keynote
- Mail
- PDF
- Photos
- Pixelmator

Import Files into Photos

This action returns references to the media items imported into the Photos application.

Input: (Files/Folders) Image files

Options: Action options include:

- 1) Importing into an existing top-level album; a new album; or into the default library.
- 2) The option to delete the source files upon completion of import.



Import from Drop Box

Record Step Stop Run

Actions Variables Q Name

Library

- Acorn
- Aperture
- Apple Configurator 2
- Automator
- Calendar
- Contacts
- Dictionary
- DVD Player
- Finder
- Font Book
- Image Capture
- iPhoto
- iTunes
- Keynote
- Mail
- PDF
- Photos
- Pixelmator

Add to Album

Display Referenced Photo

Export Media Items

Export Media Items to Keynote

Get Album by Name

Get Contents of Shared Album

Get Selected Photos Items

Import Files into Photos

Play Narrated Slideshow

Show Location in Maps

Slideshow Controller

Folder Action receives files and folders added to Drop Box

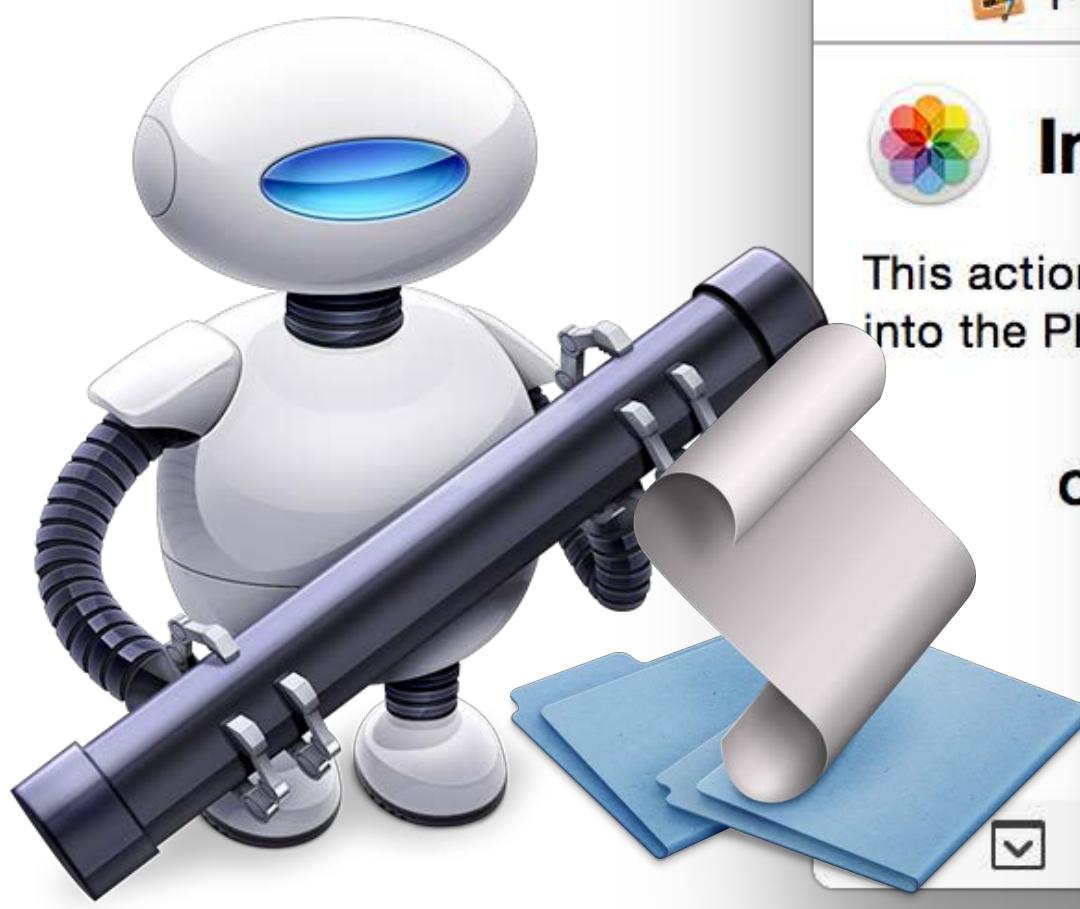
Import Files into Photos

Import without adding to album

Skip checking for duplicates

Move source files to trash after import completion

Results Options



Import from Drop Box **Import from Downloads**

Record Step Stop Run

Folder Action receives files and folders added to **Downloads**

Import Files into Photos

Import without adding to album

Skip checking for duplicates

Move source files to trash after import completion

Results Options

Import Files into Photos

This action returns references to the media items imported into the Photos application.

Input: (Files/Folders) Image files

Options: Action options include:

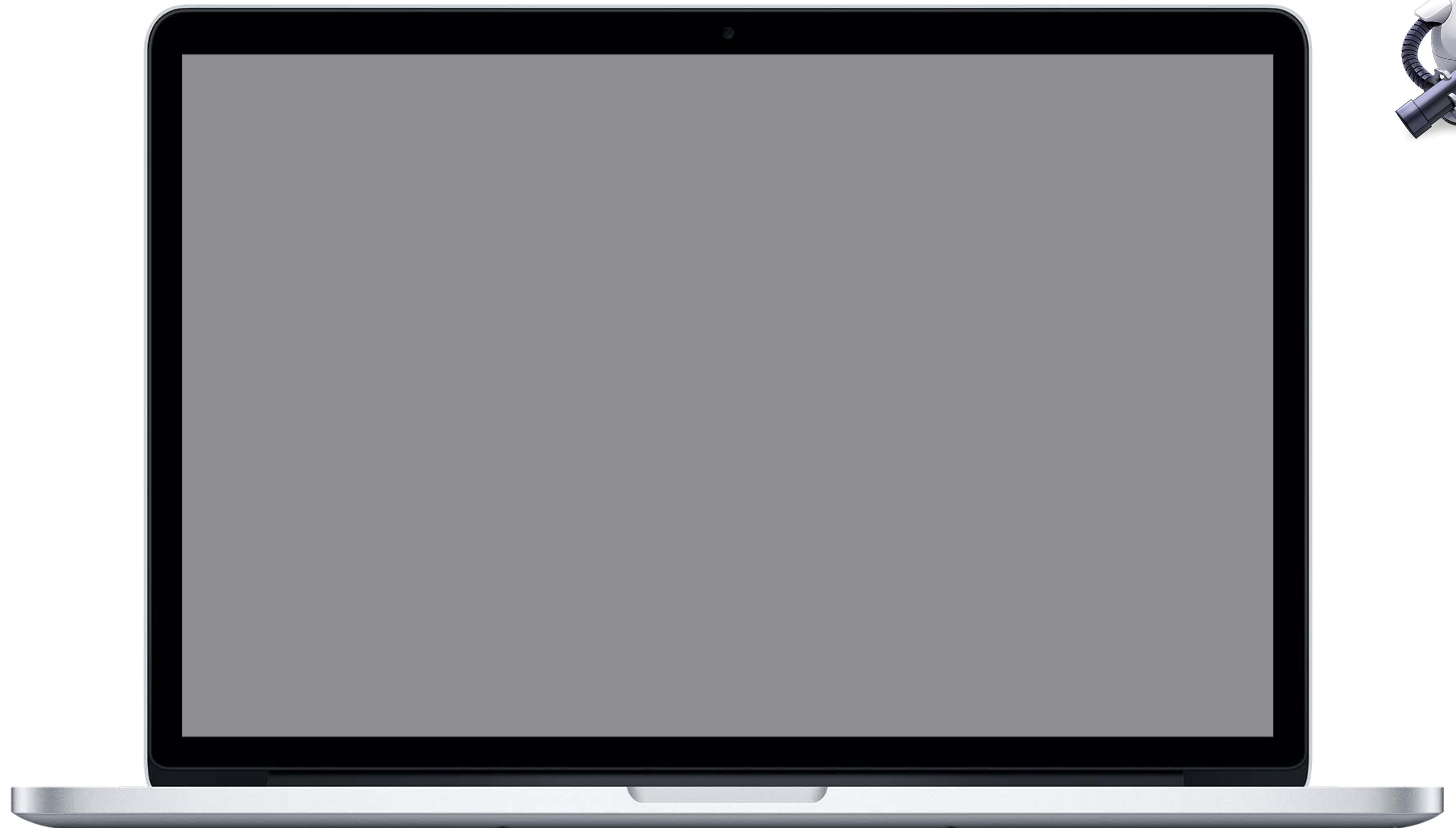
- 1) Importing into an existing top-level album; a new album; or into the default library.
- 2) The option to delete the source







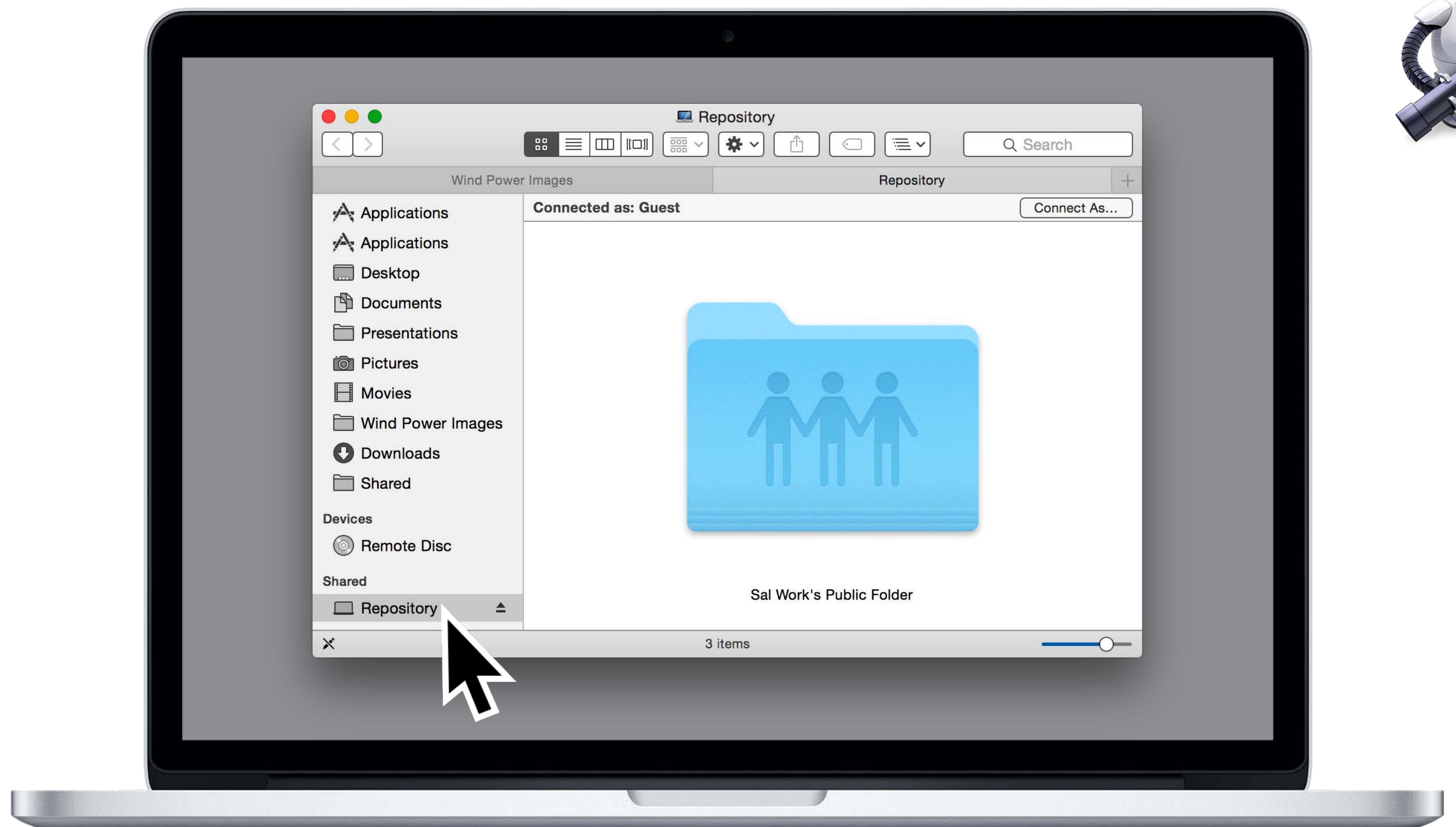


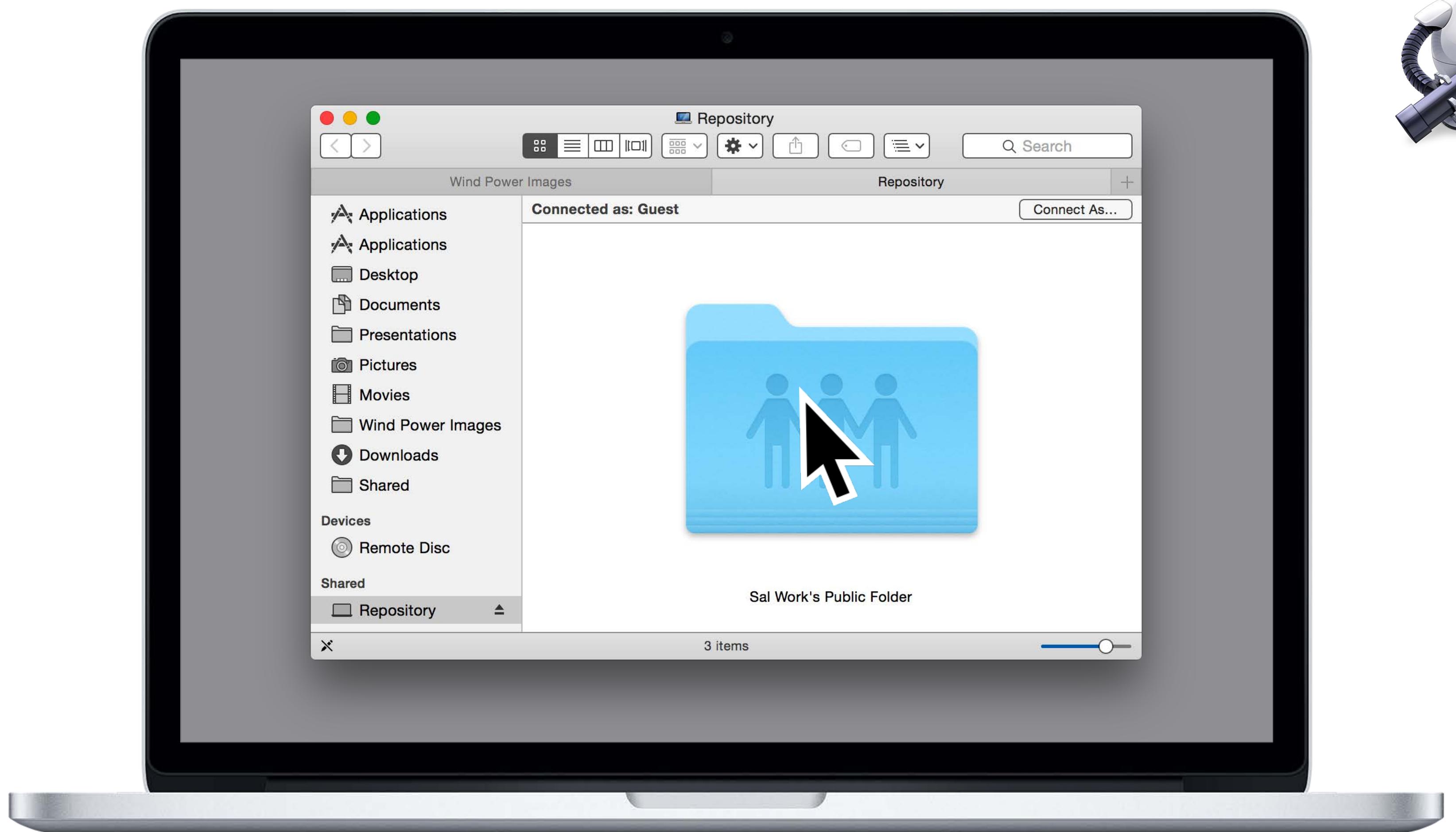


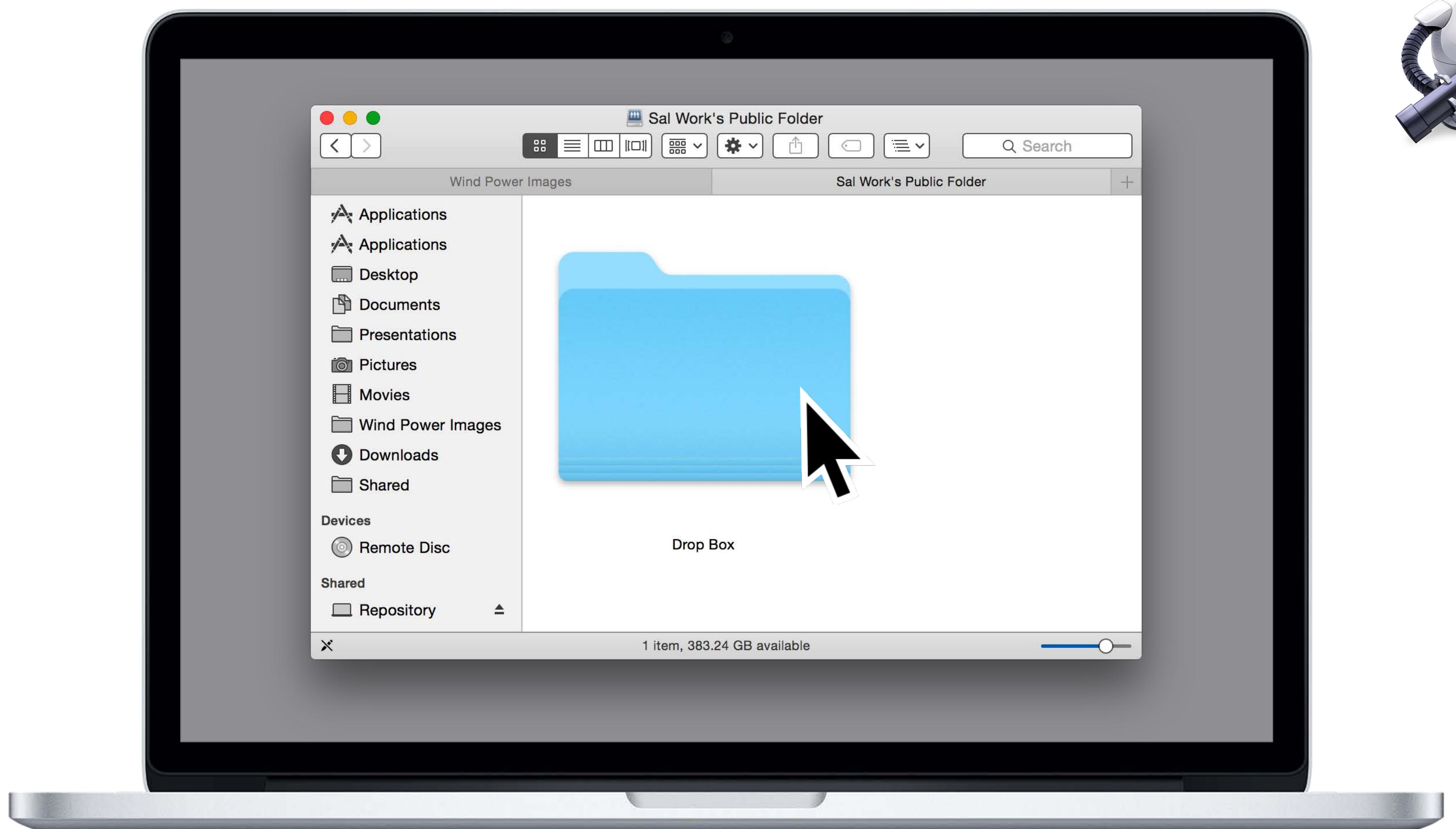


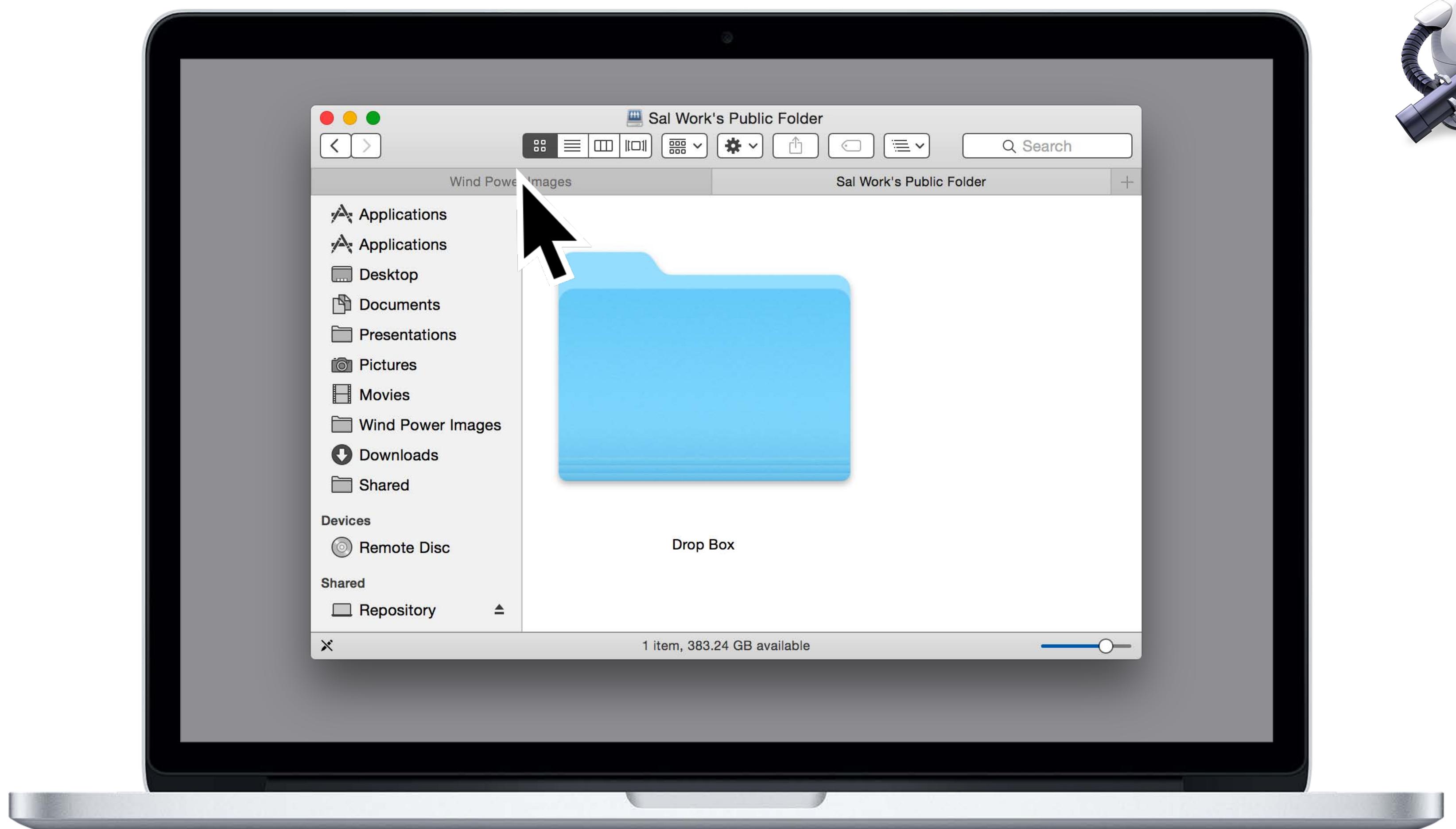


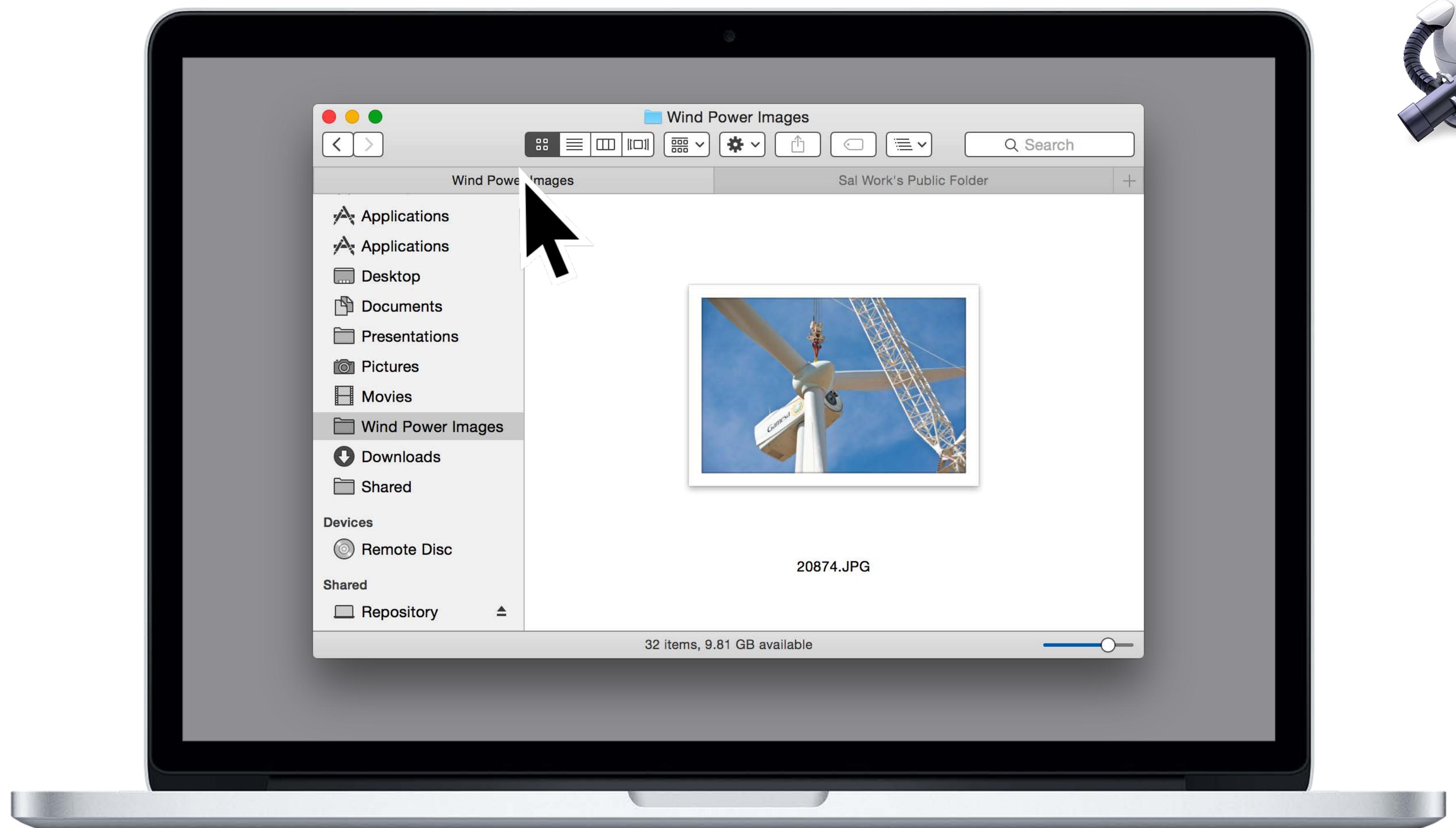




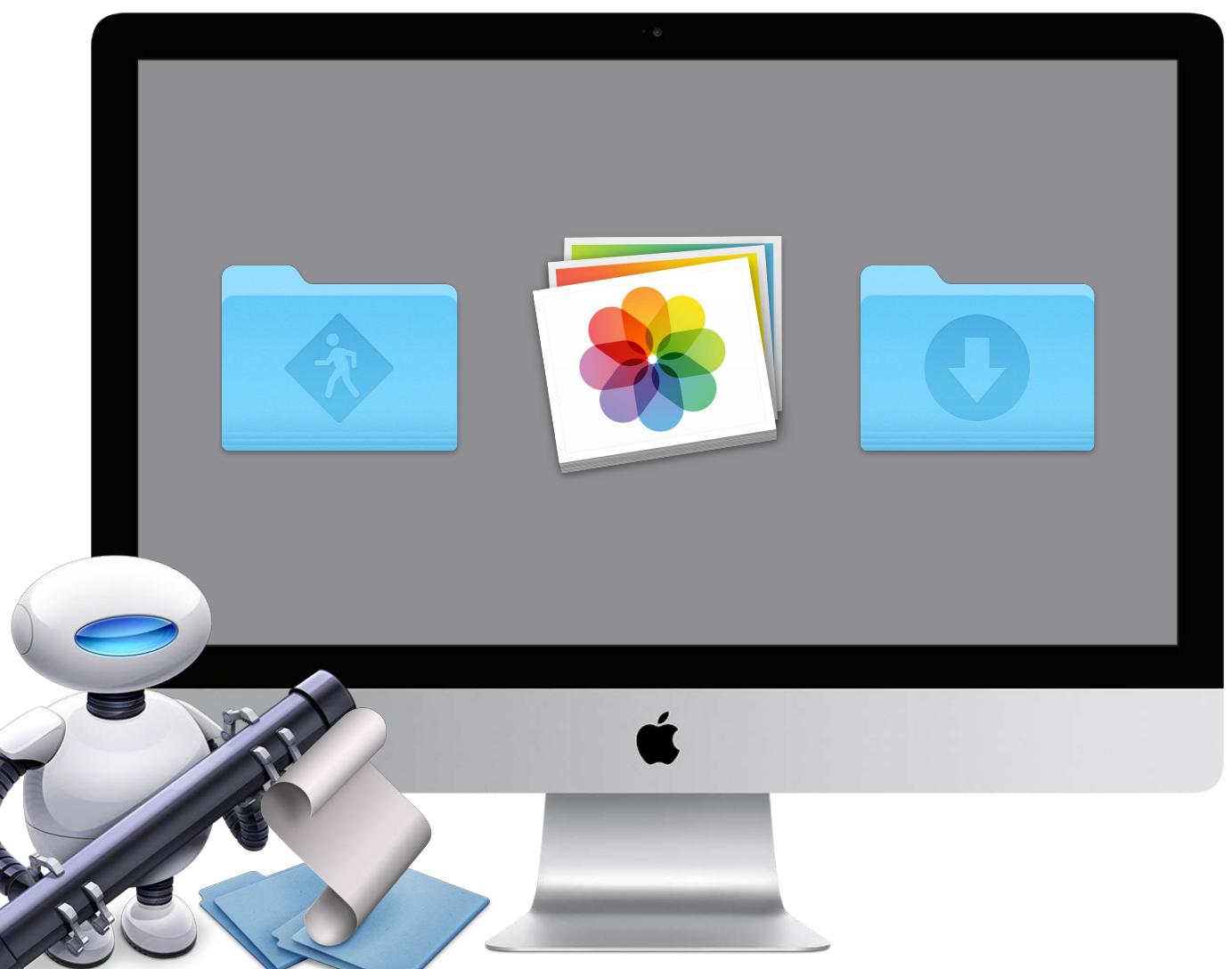


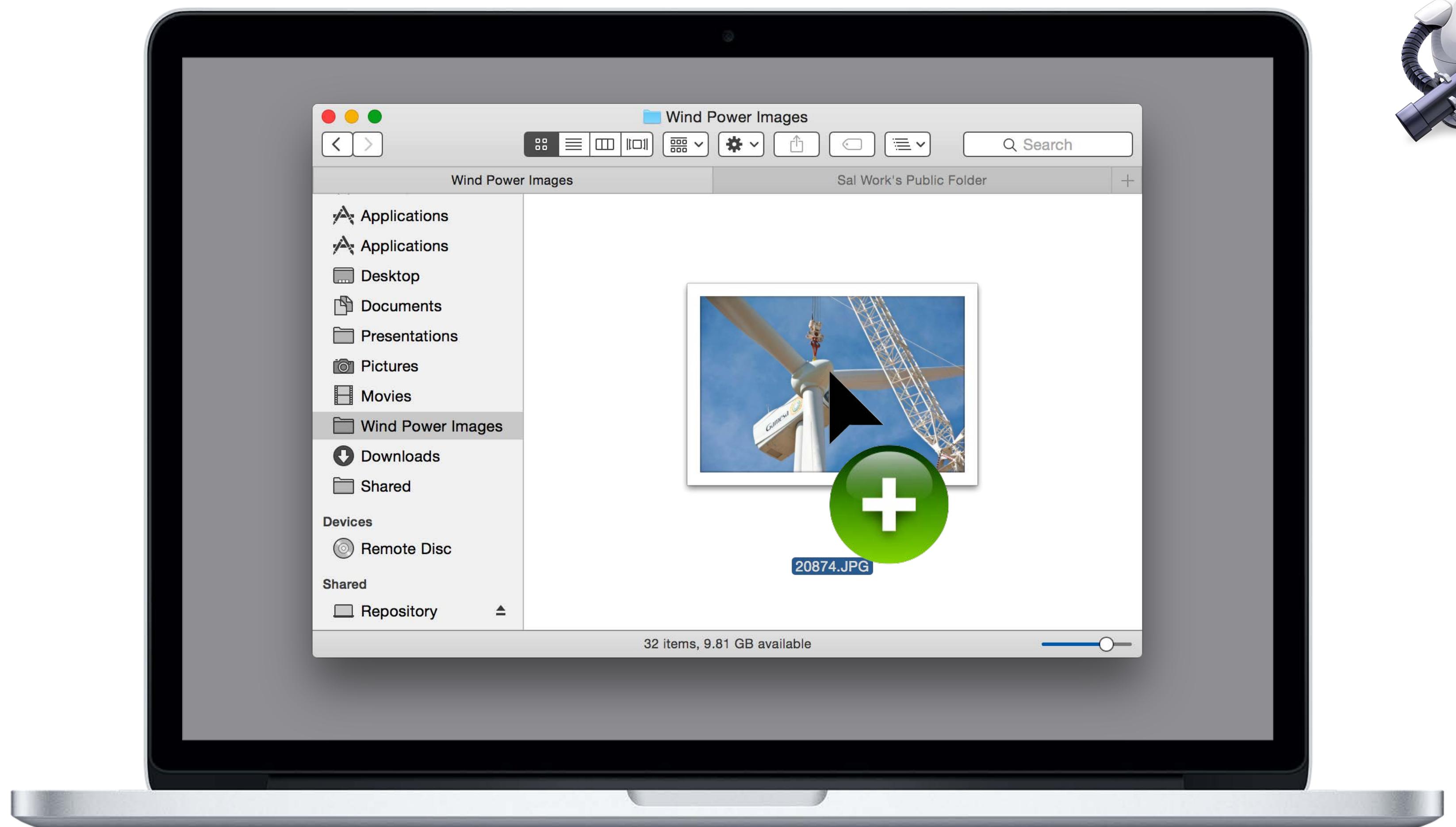




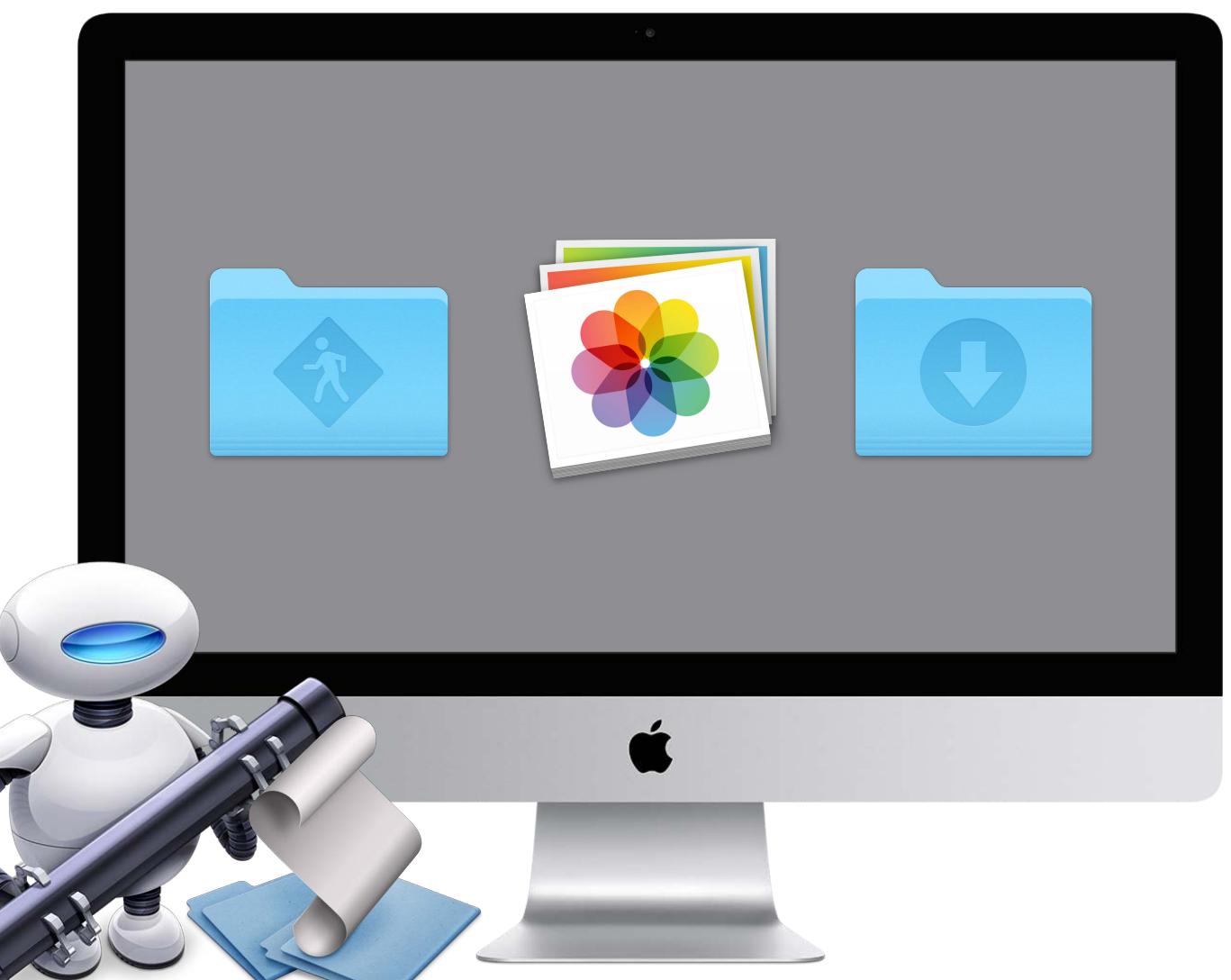


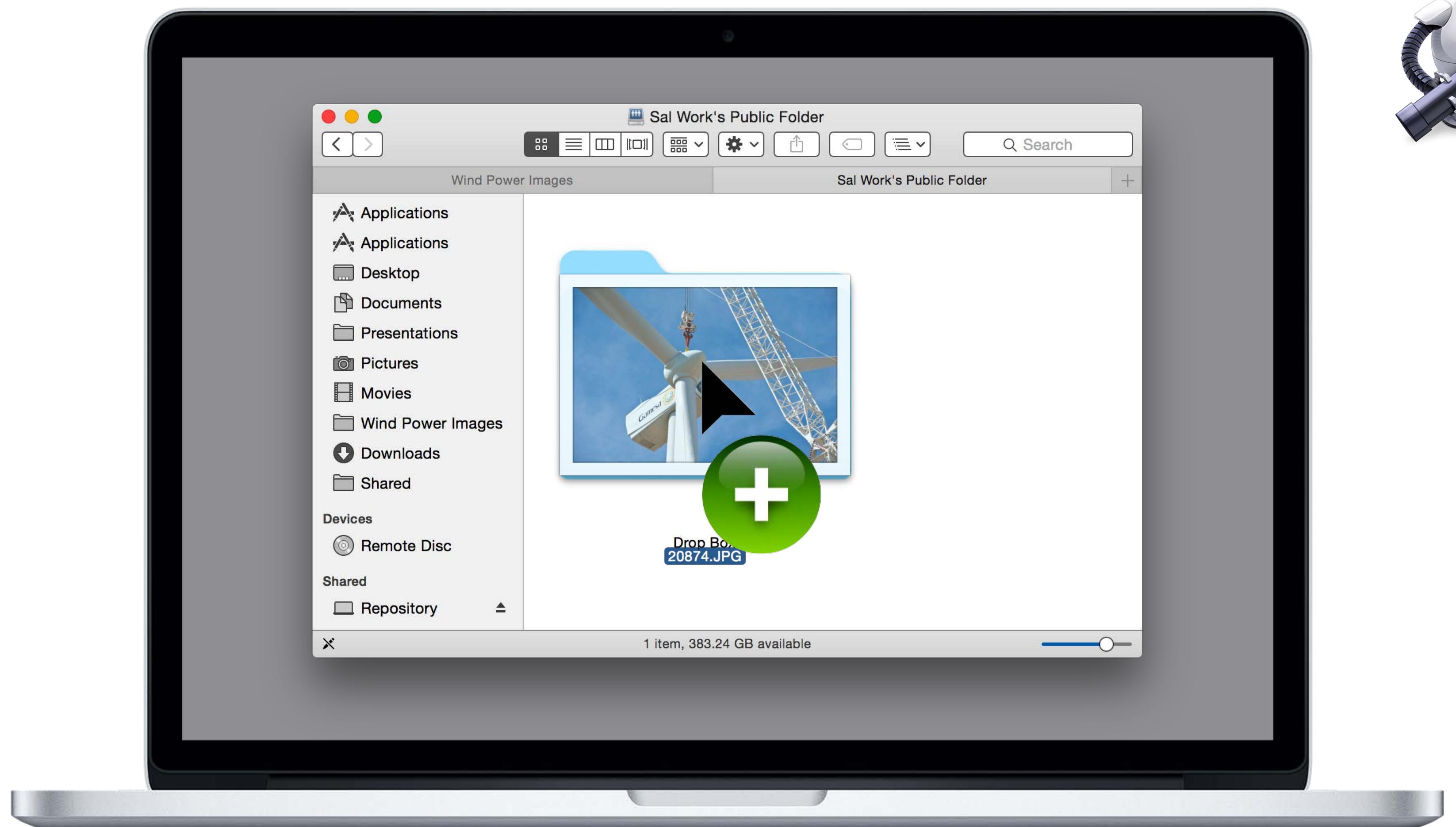


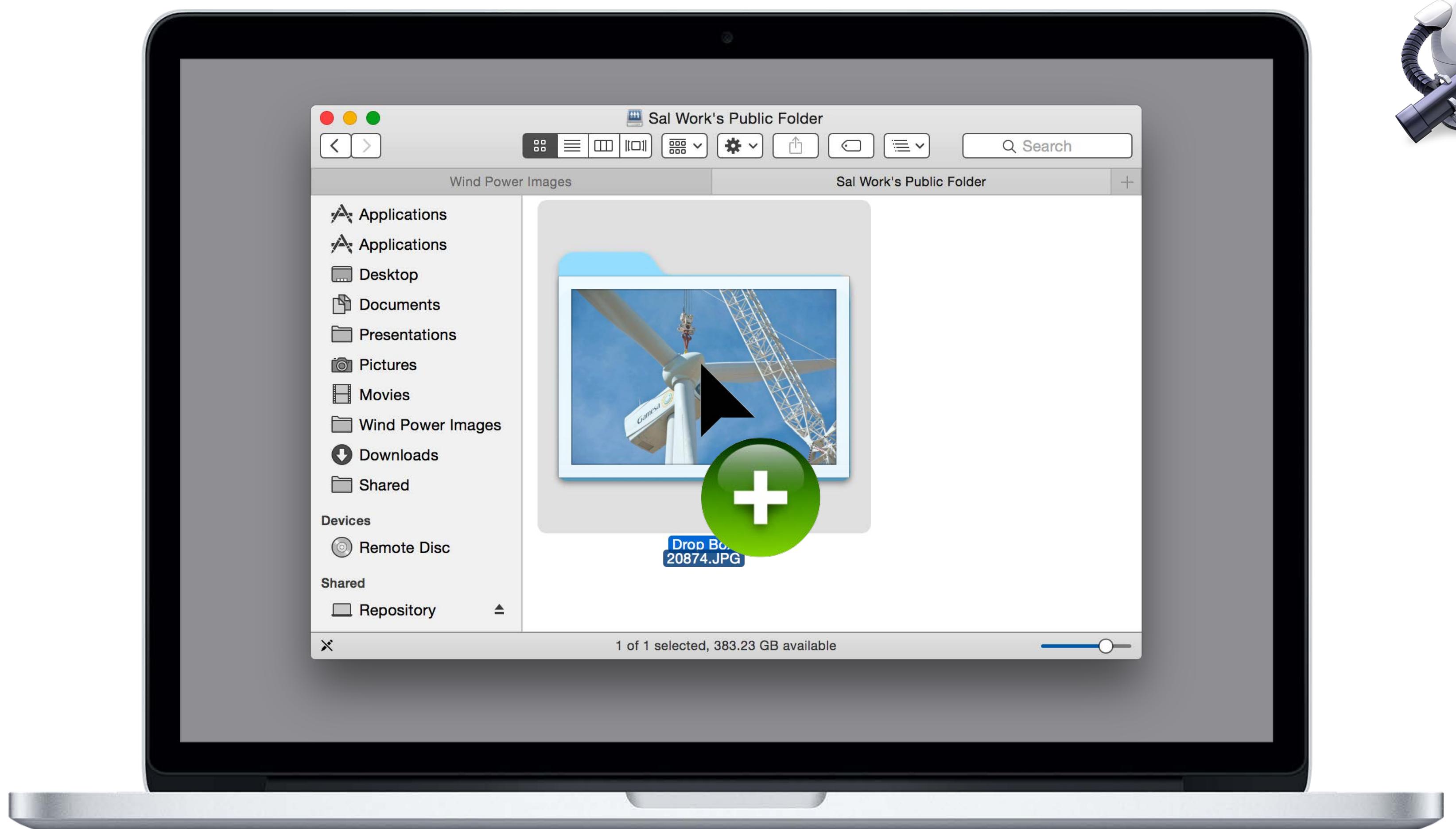


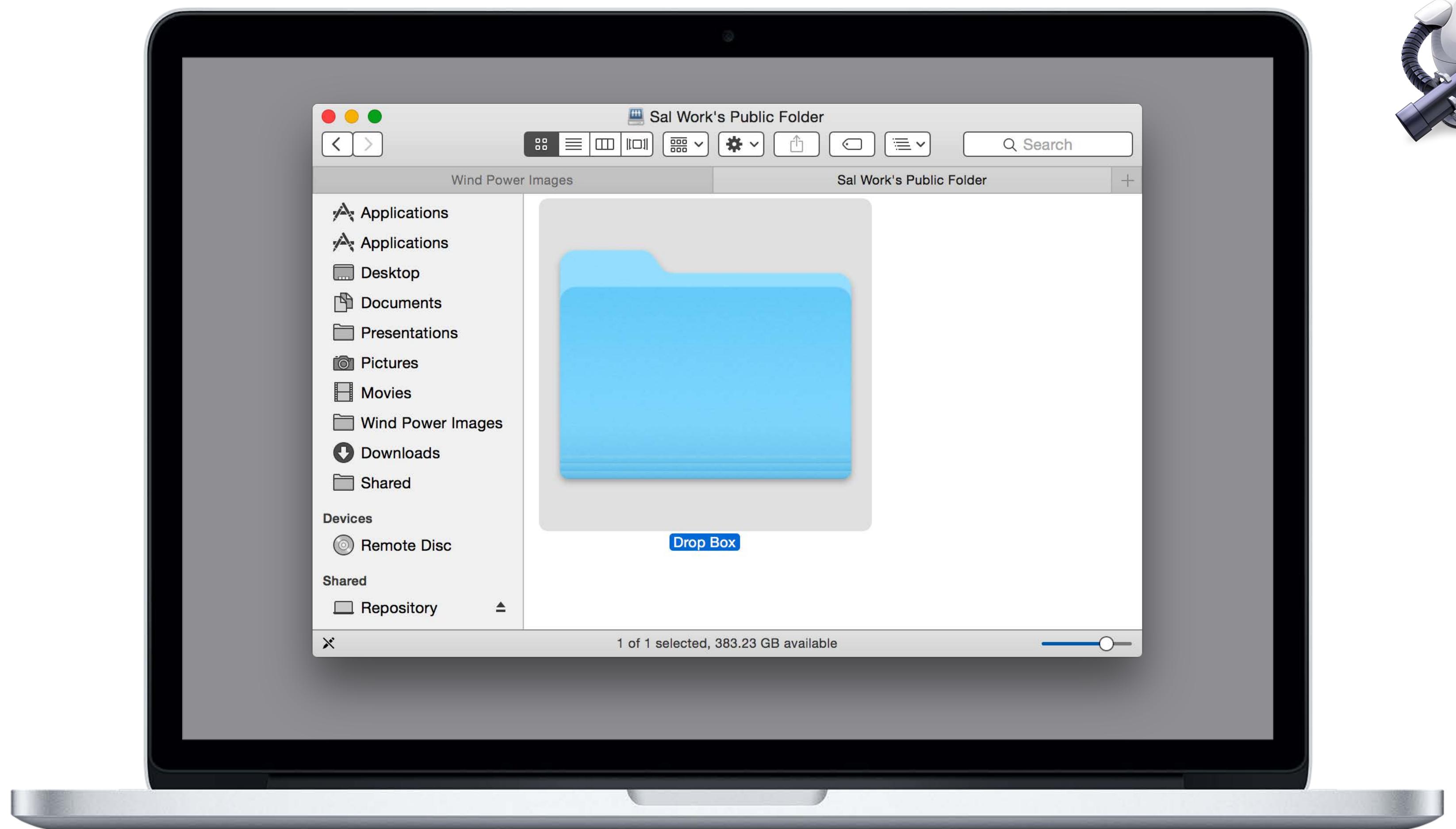


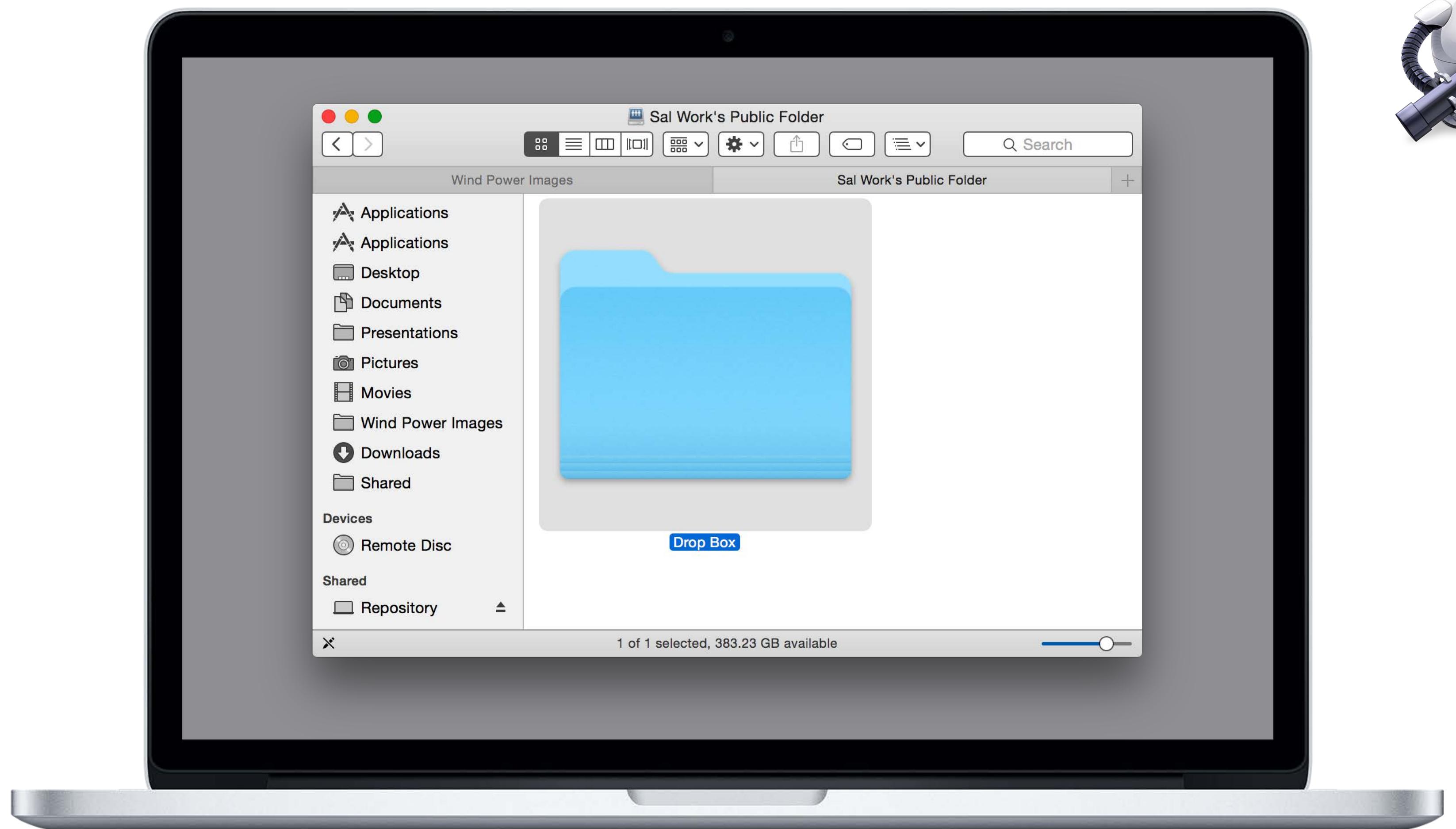


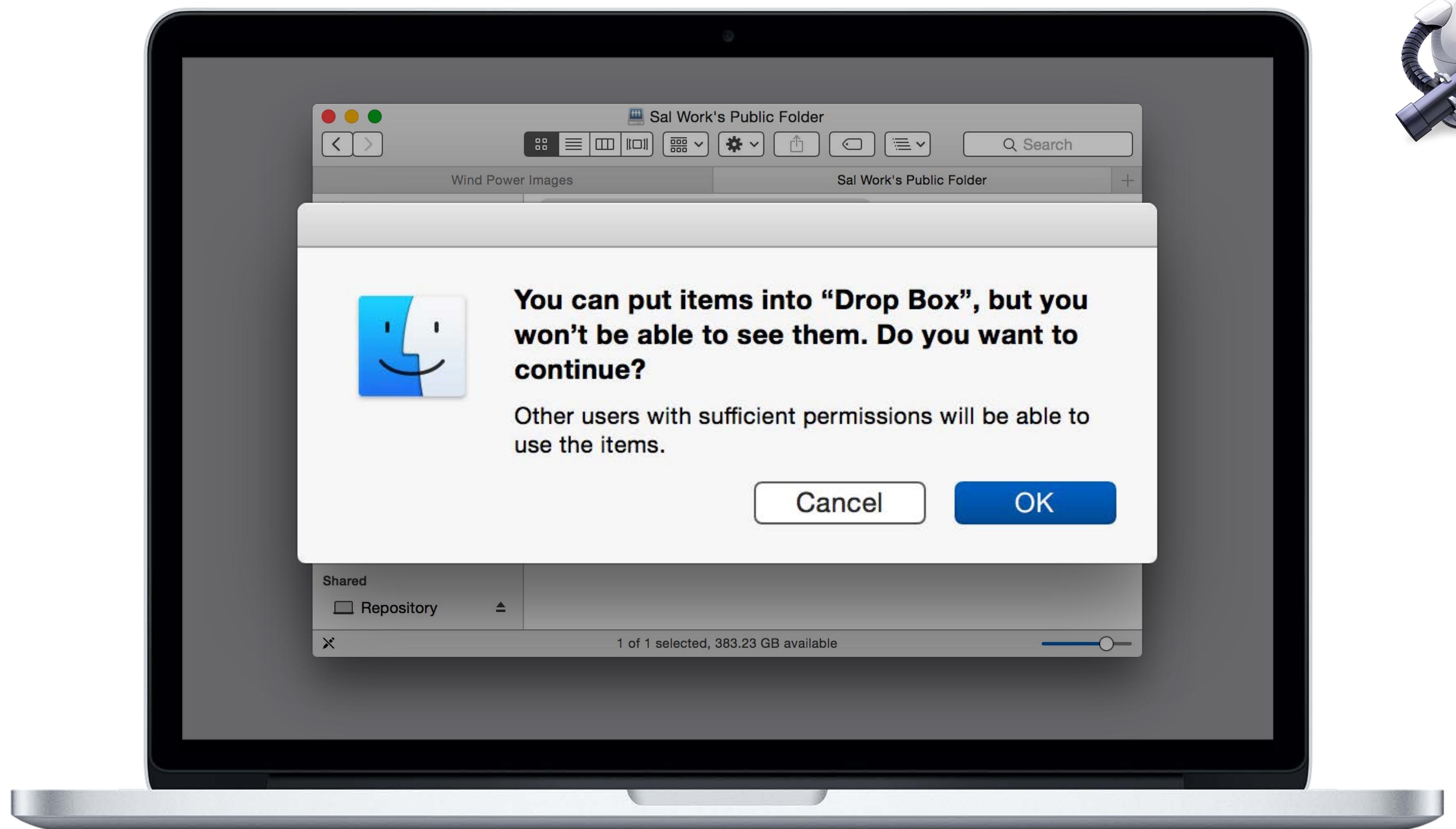


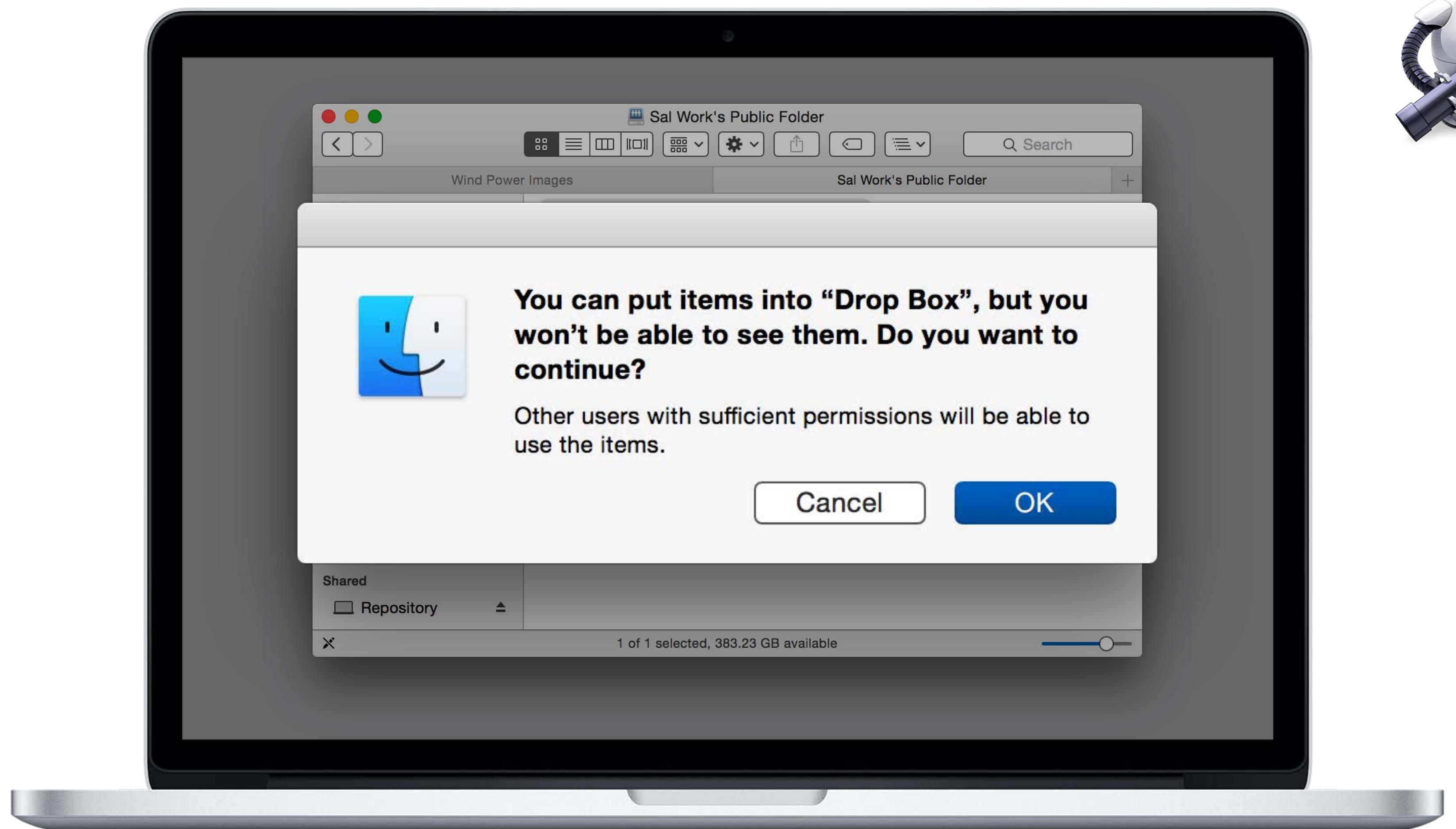


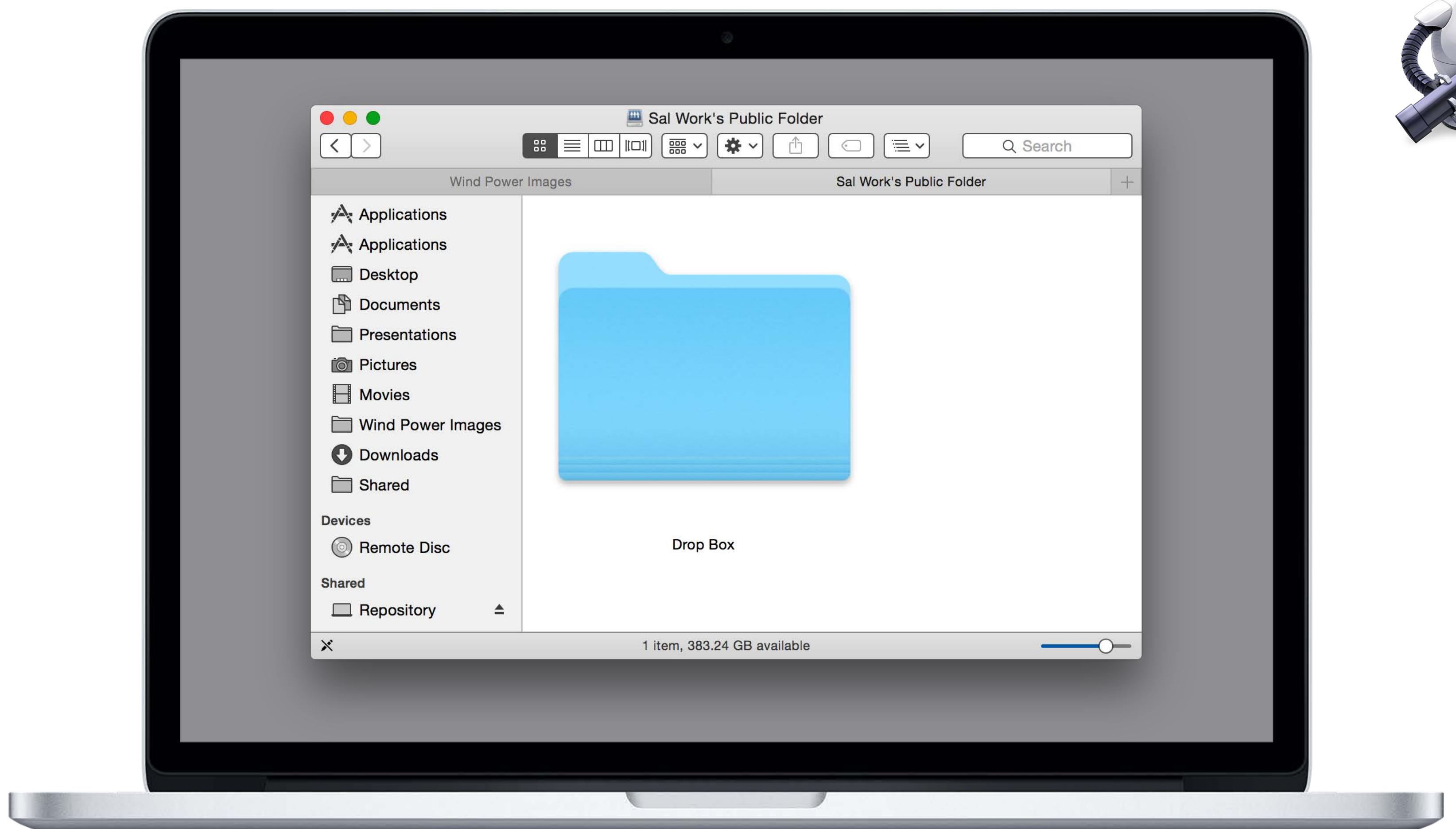


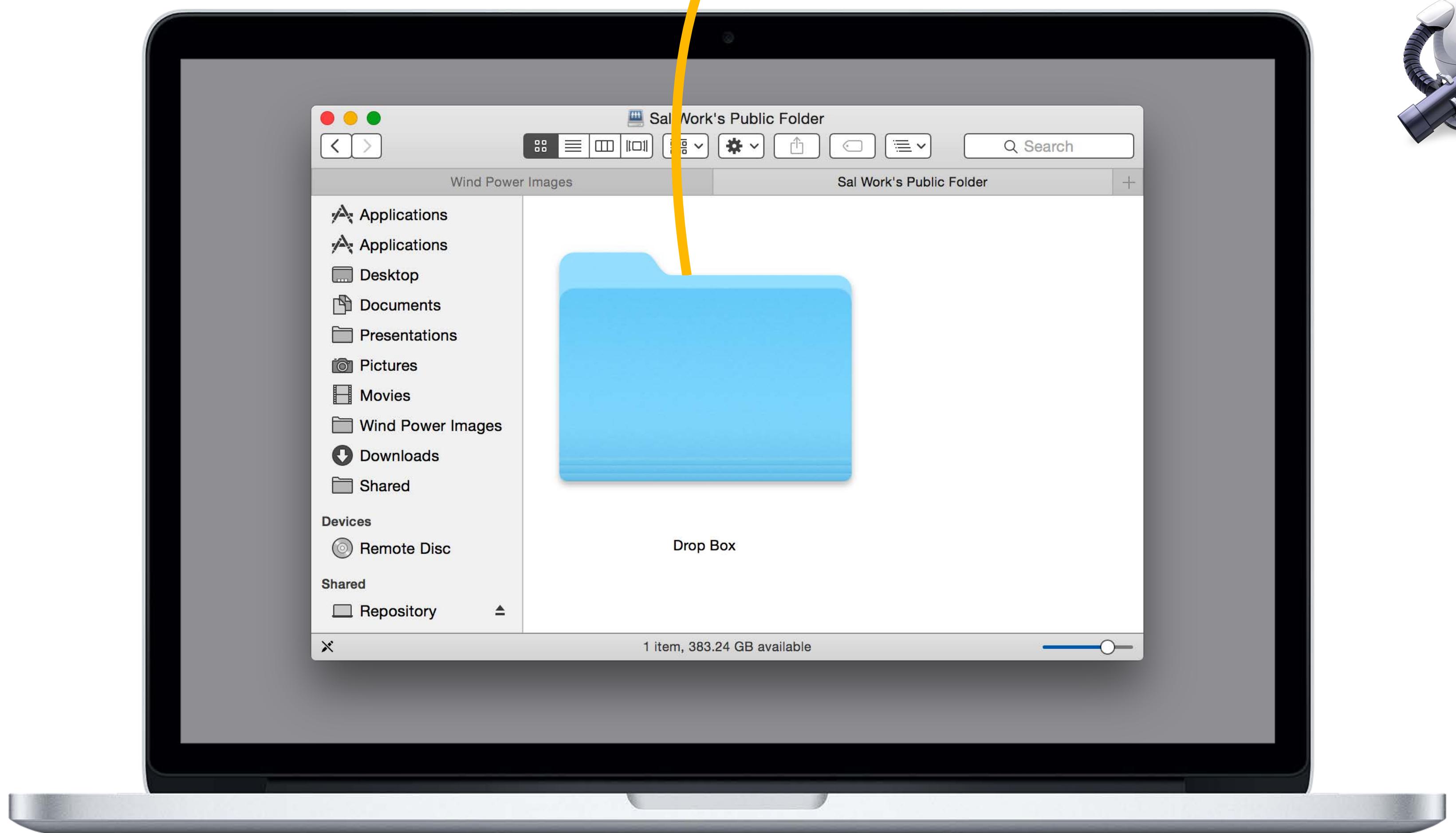


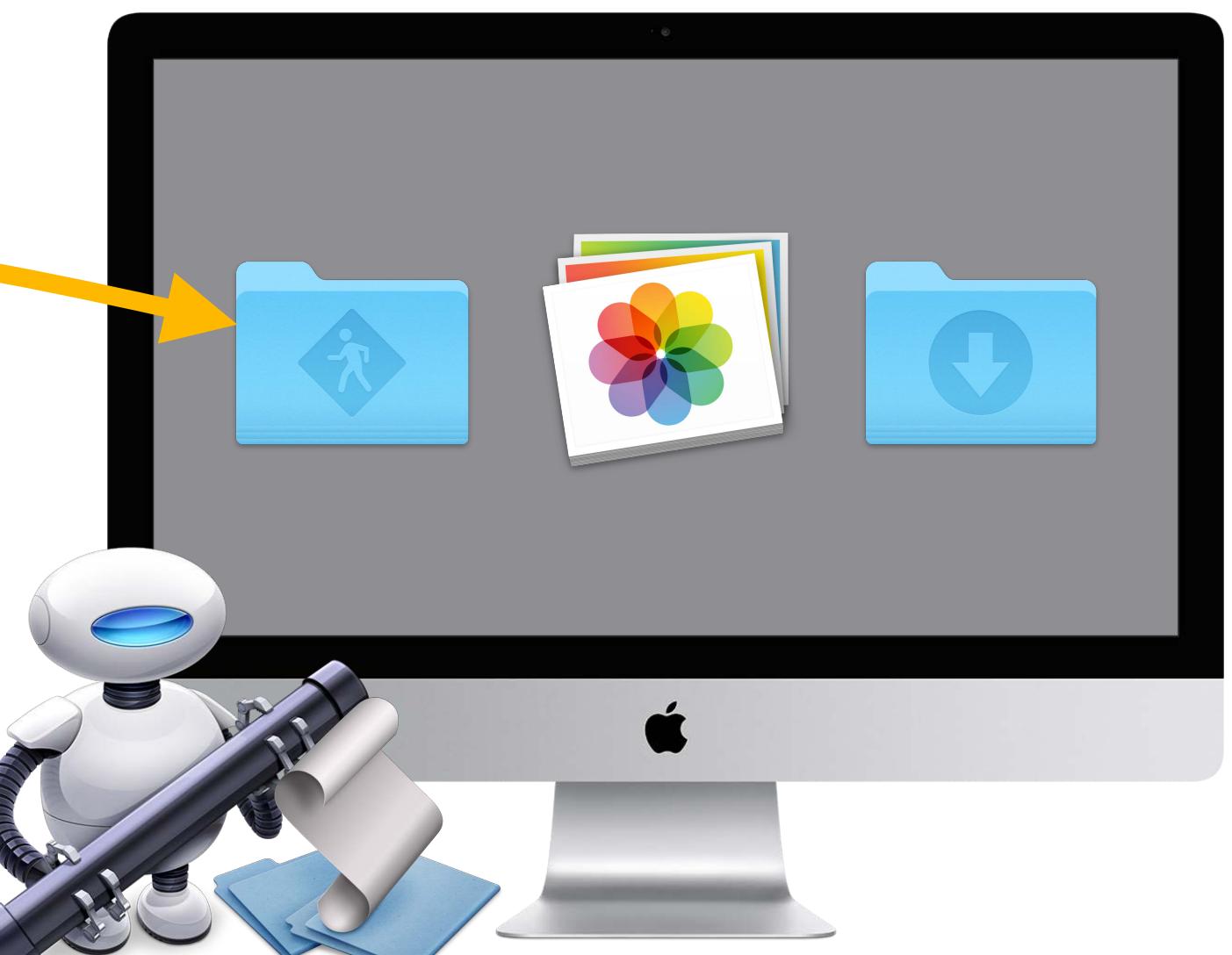
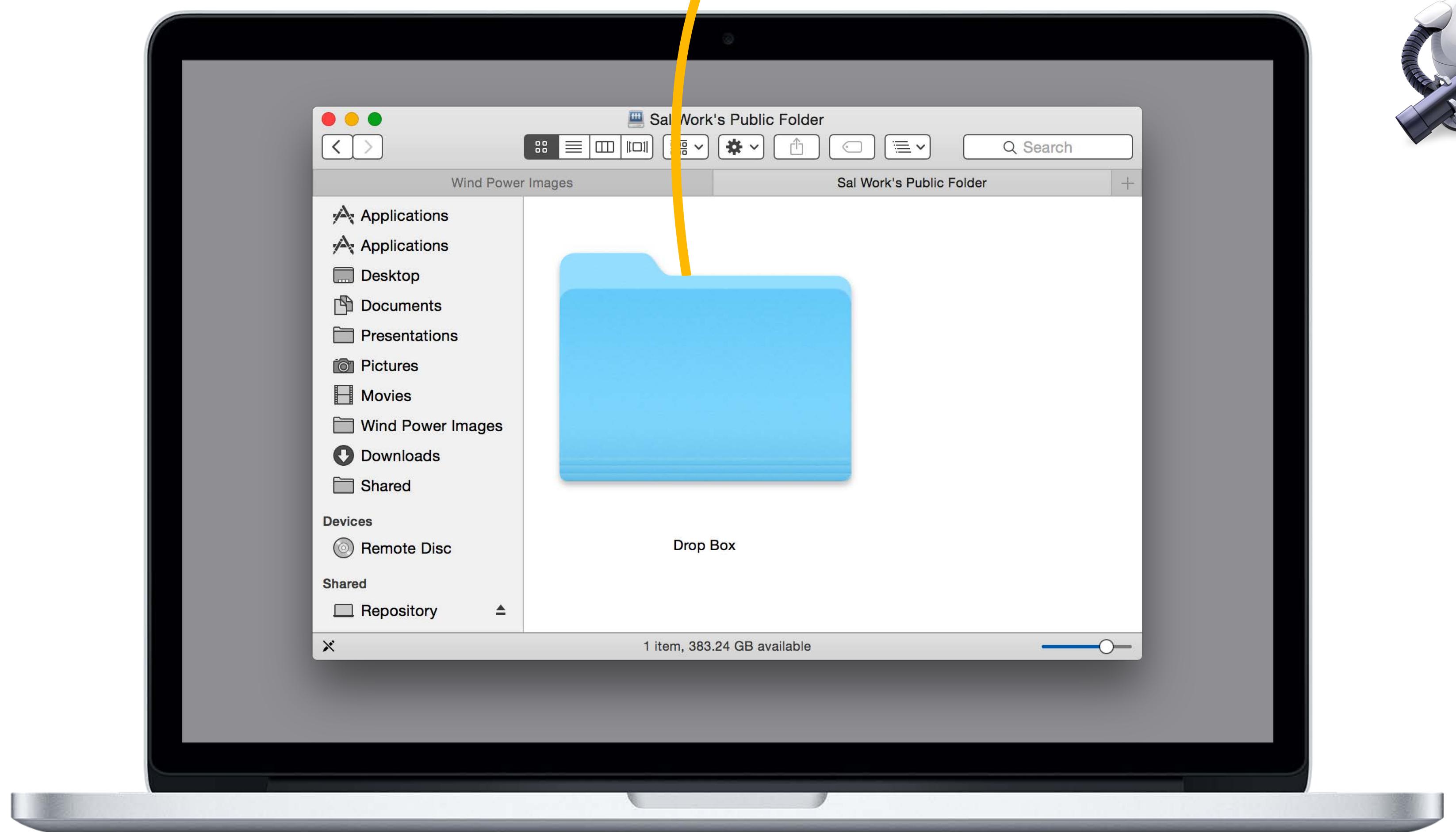


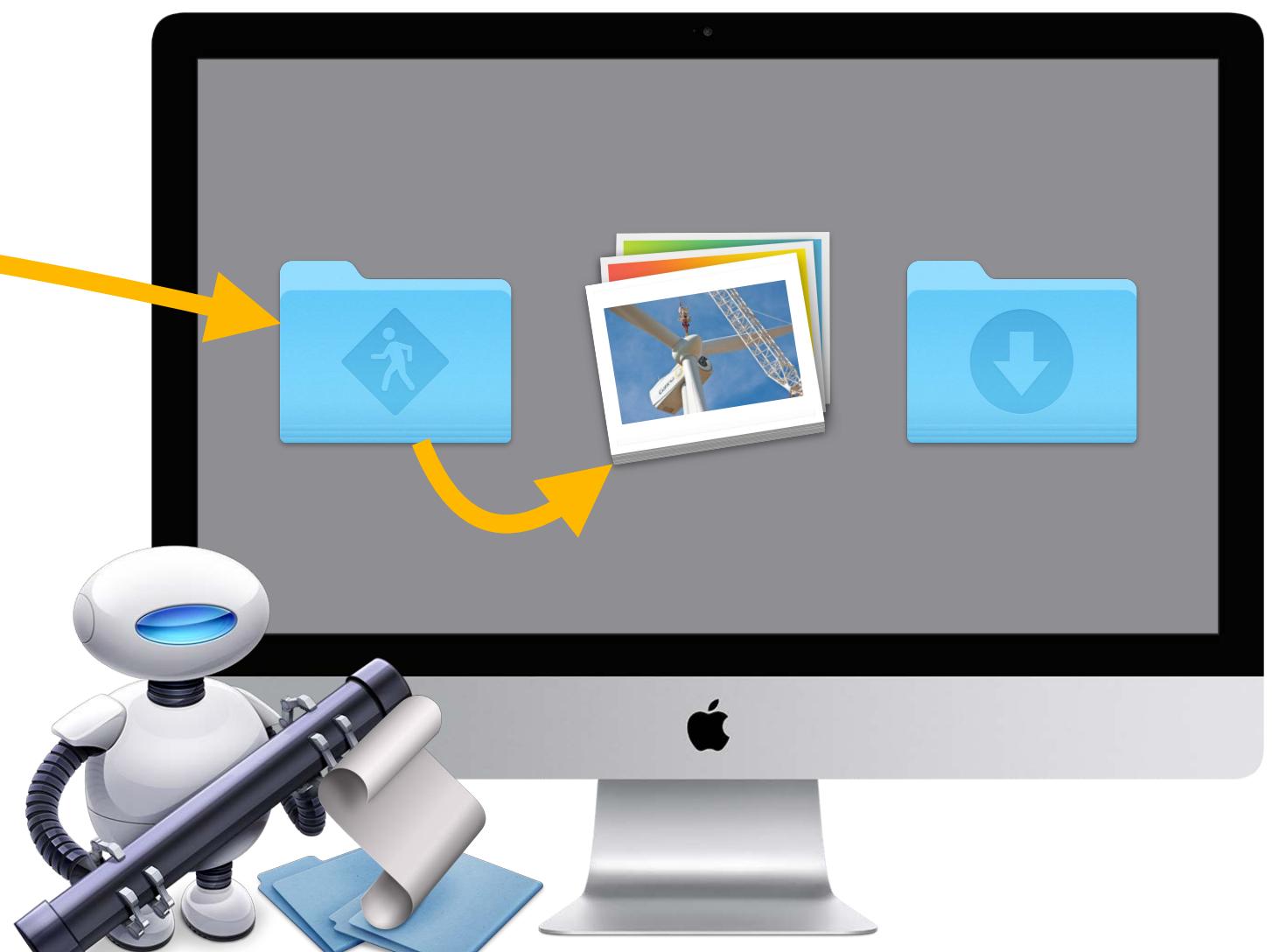
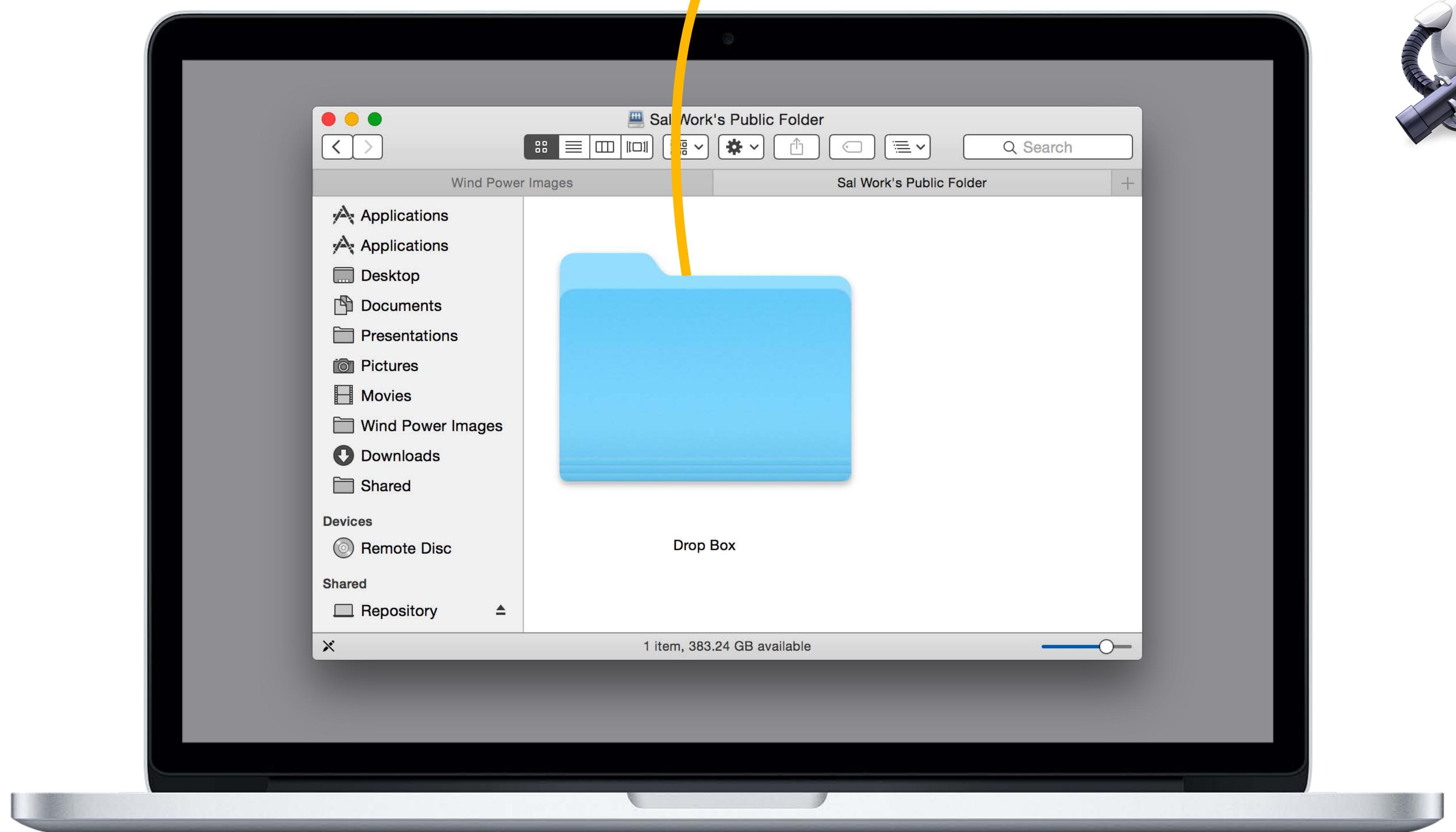


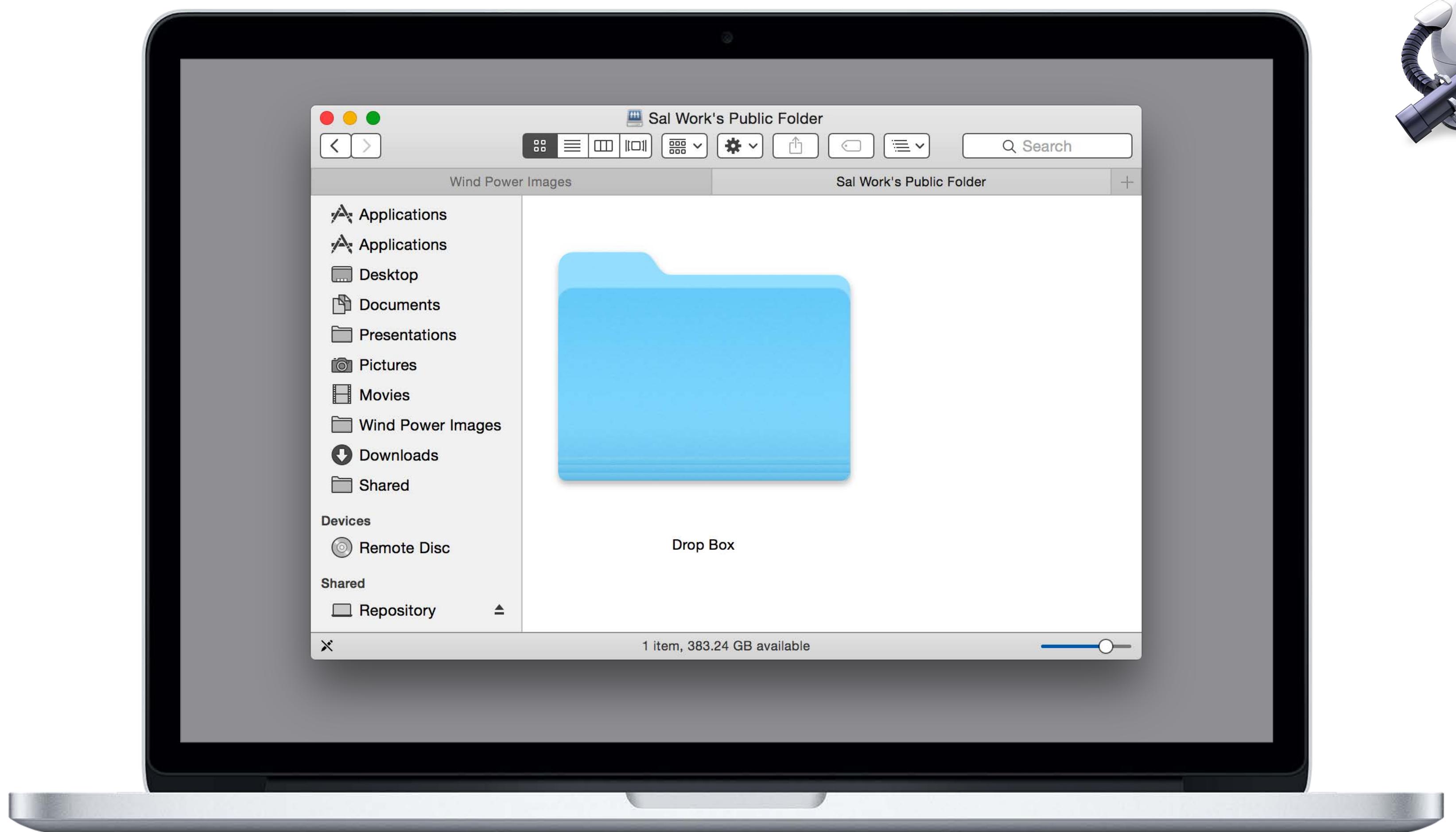




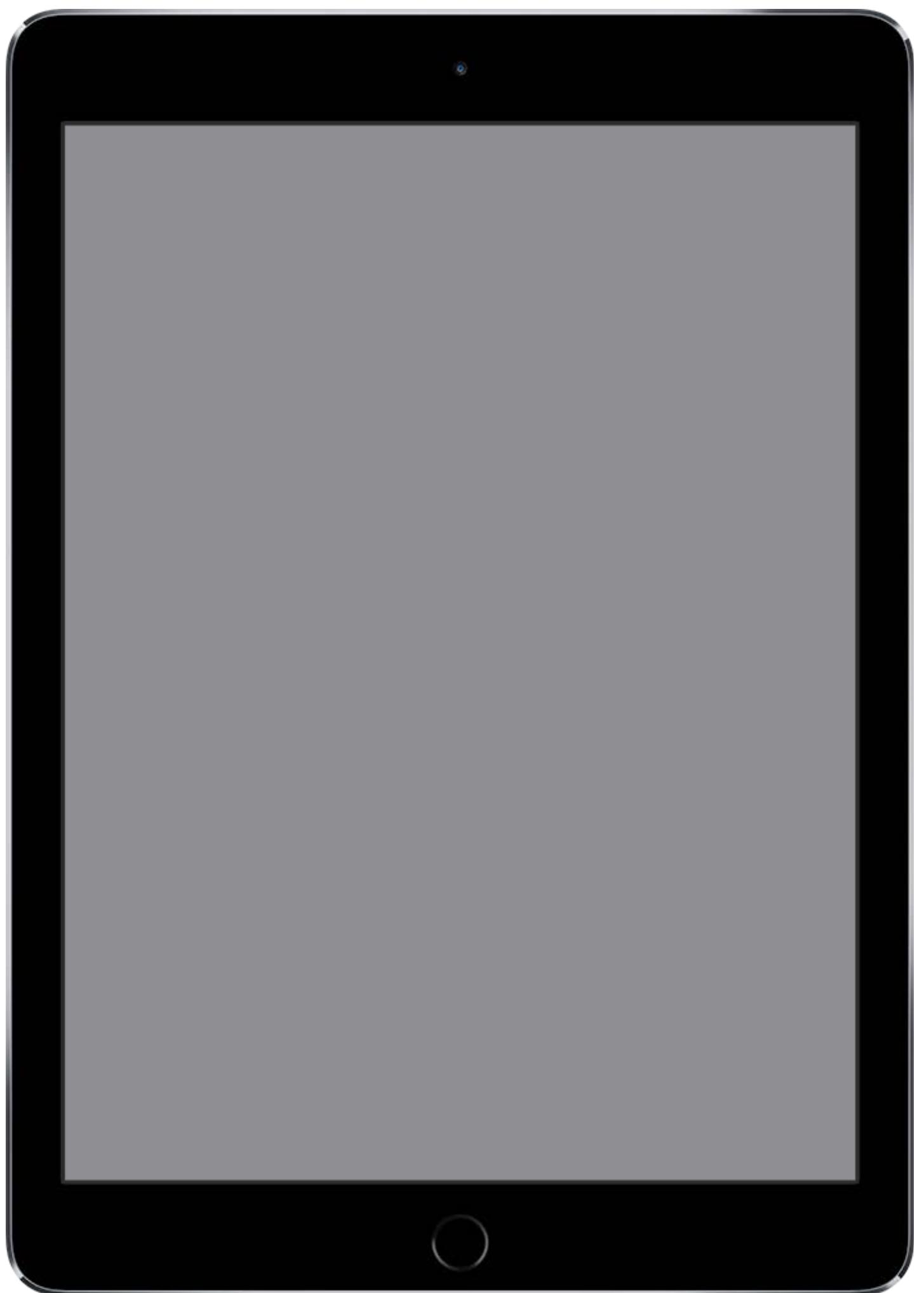


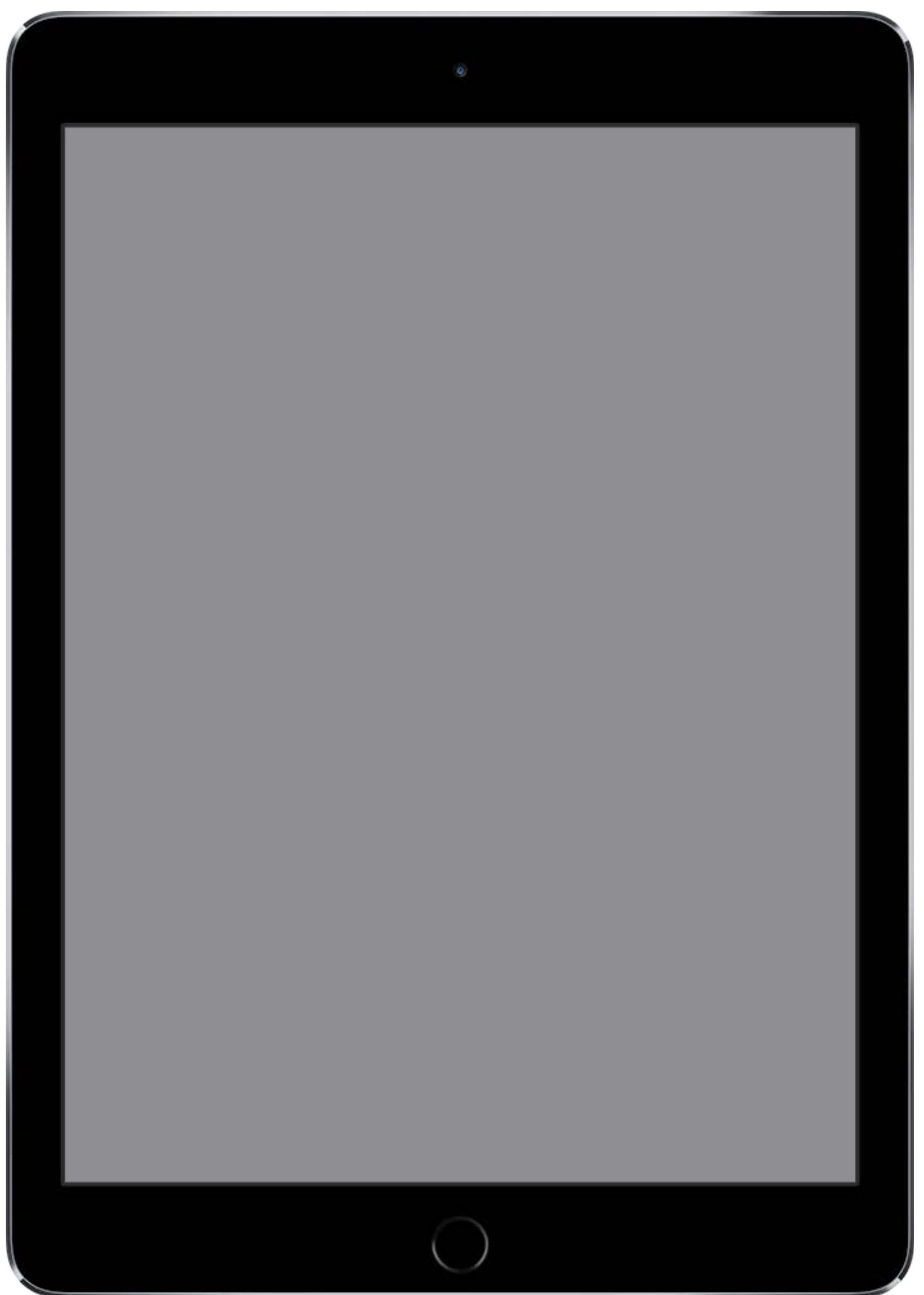


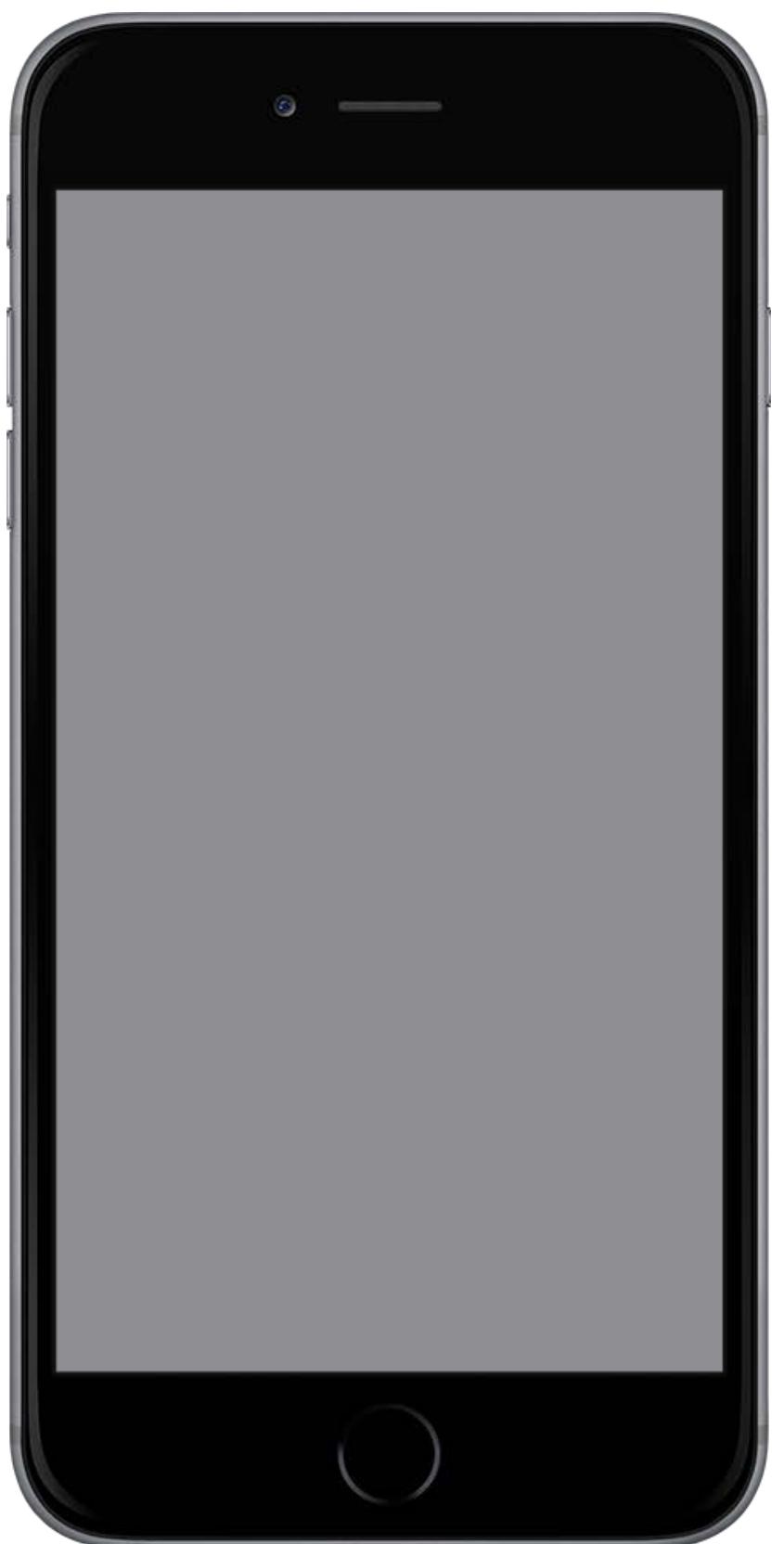
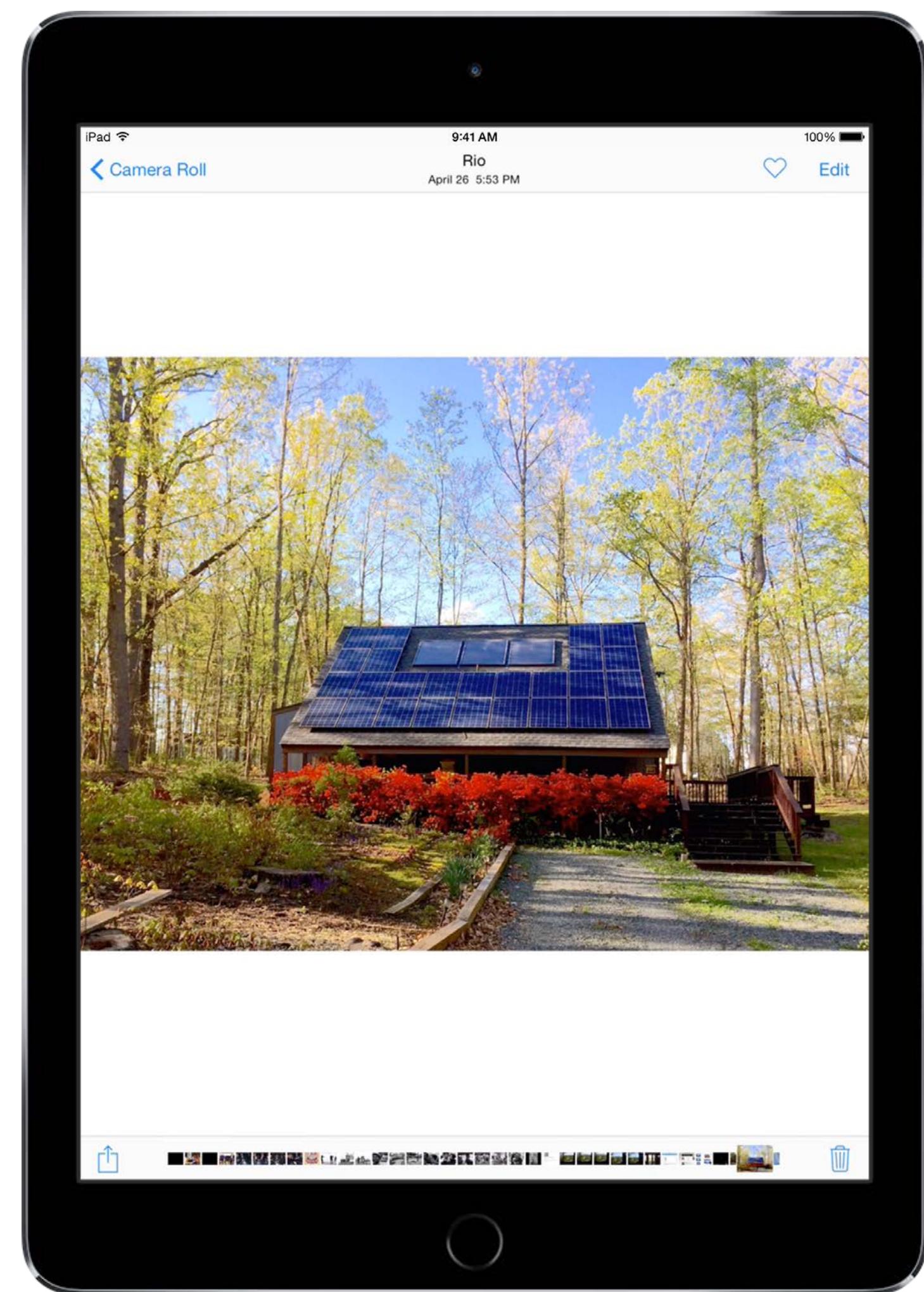


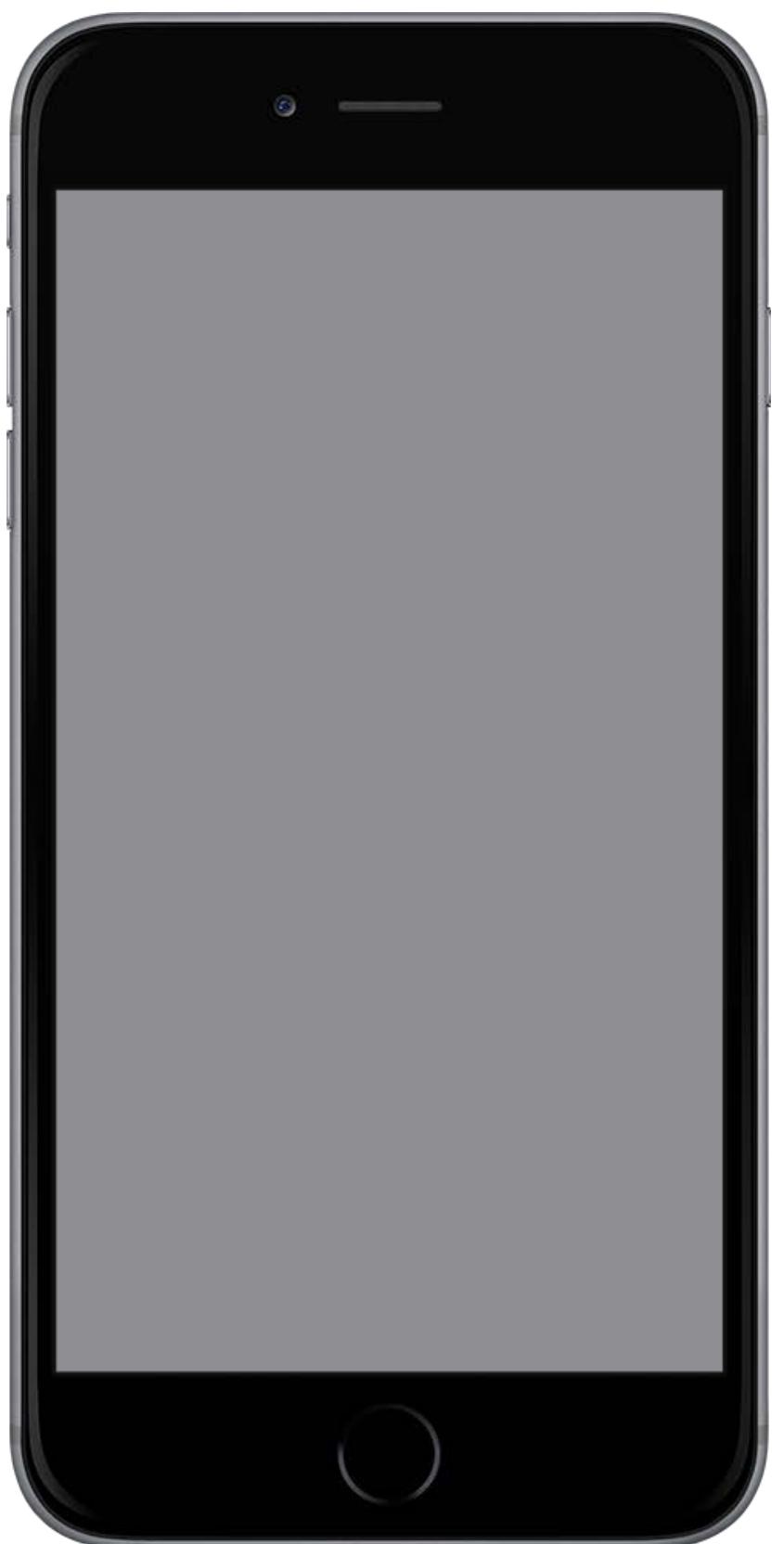
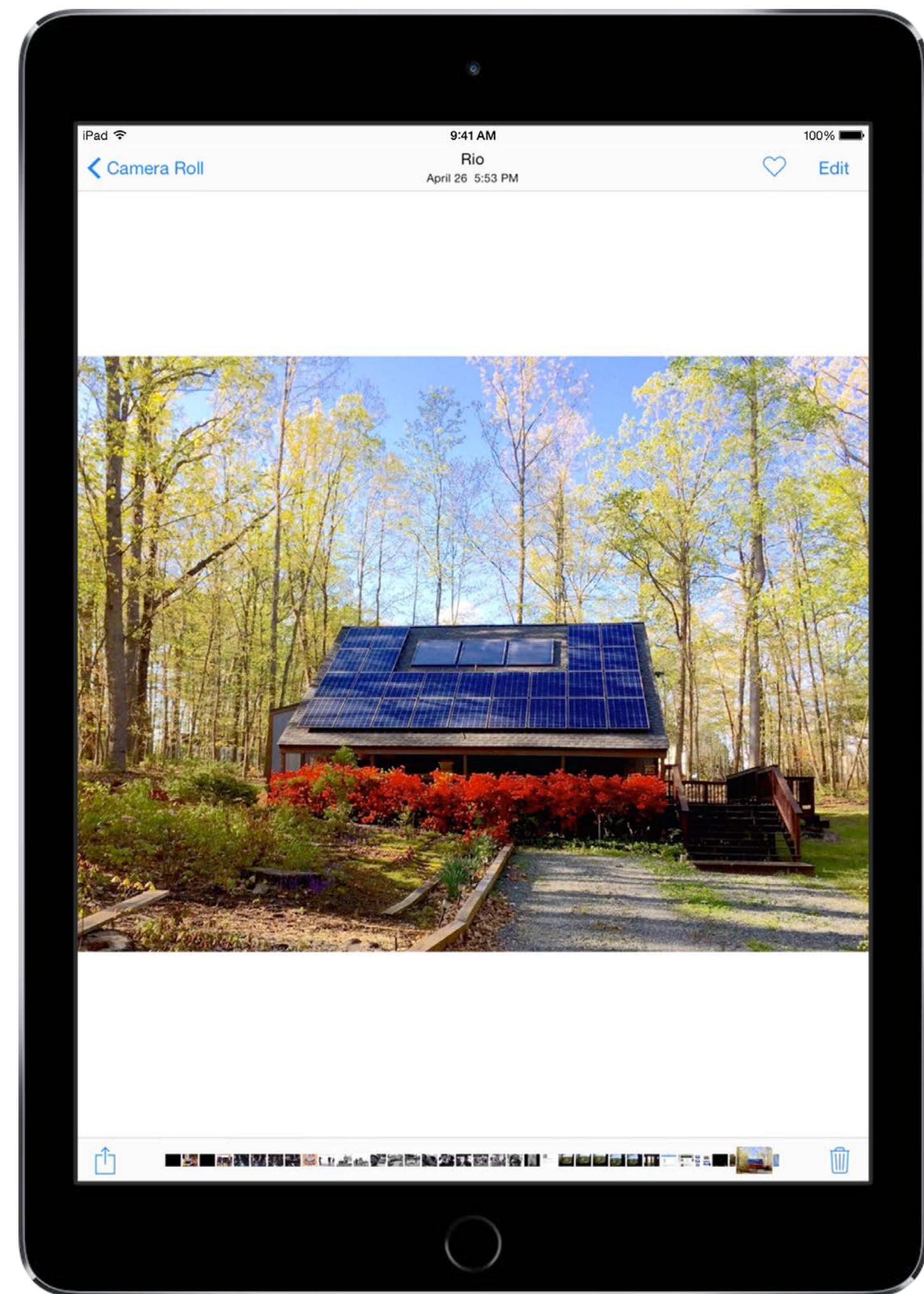


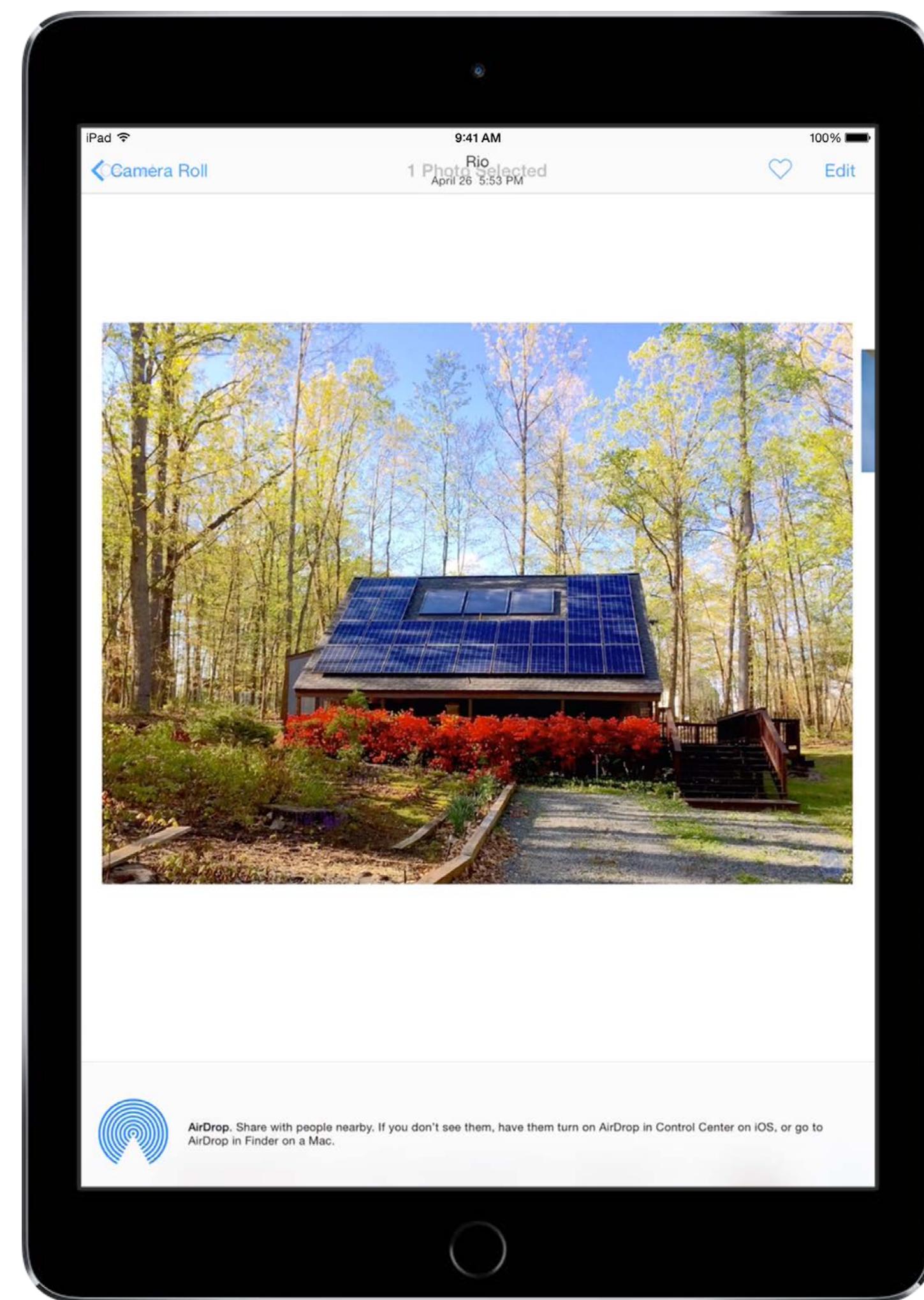


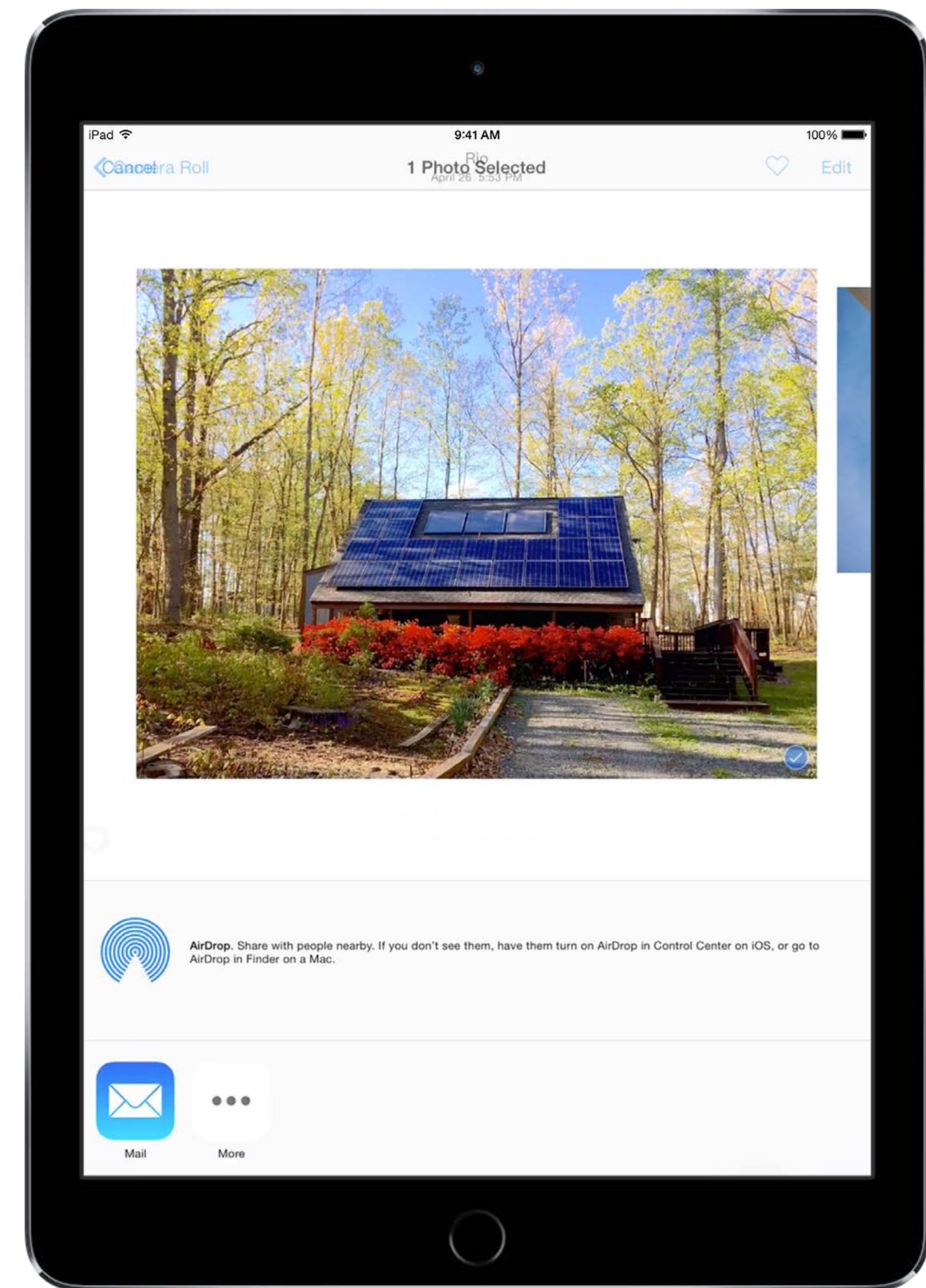


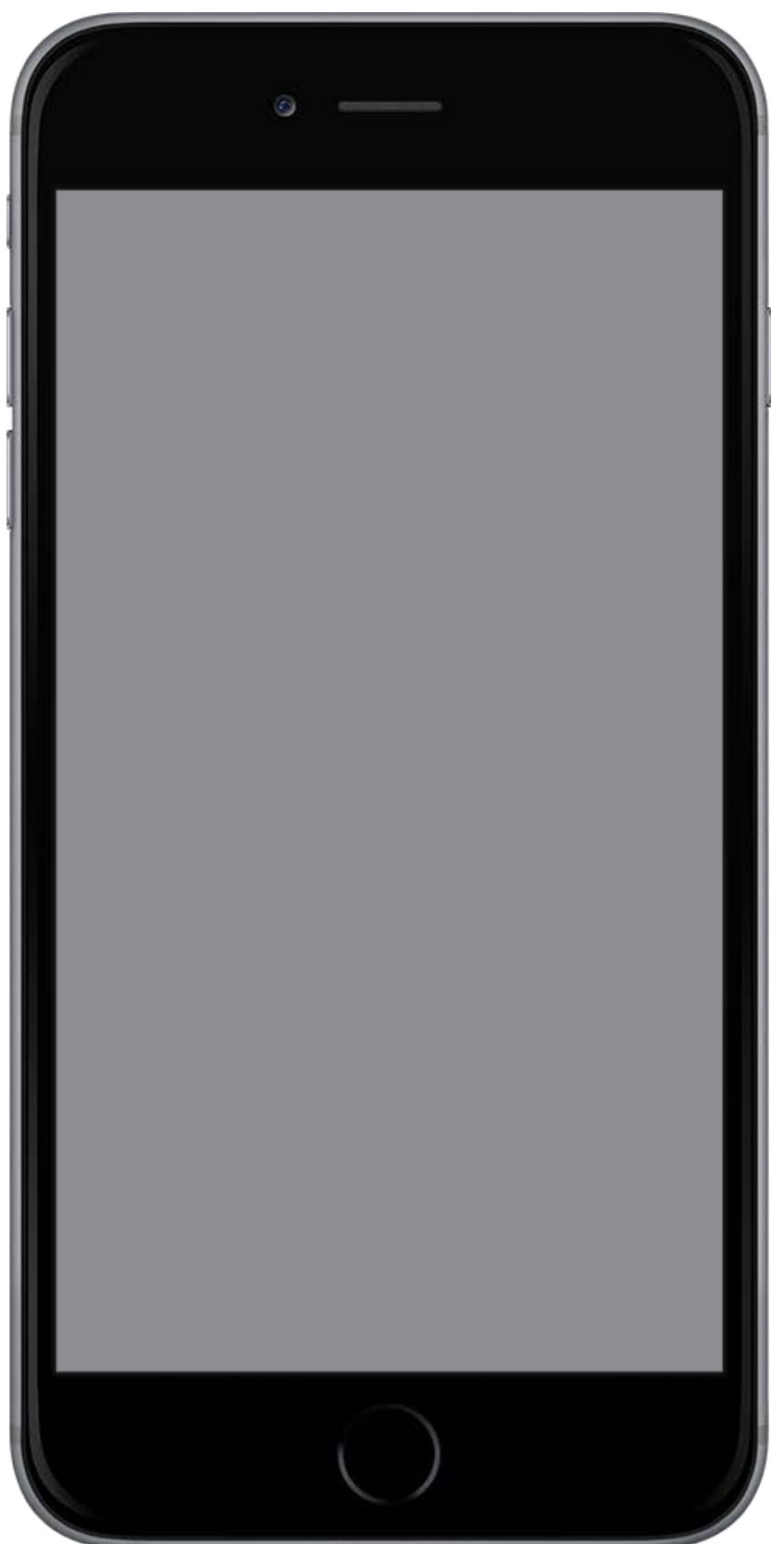
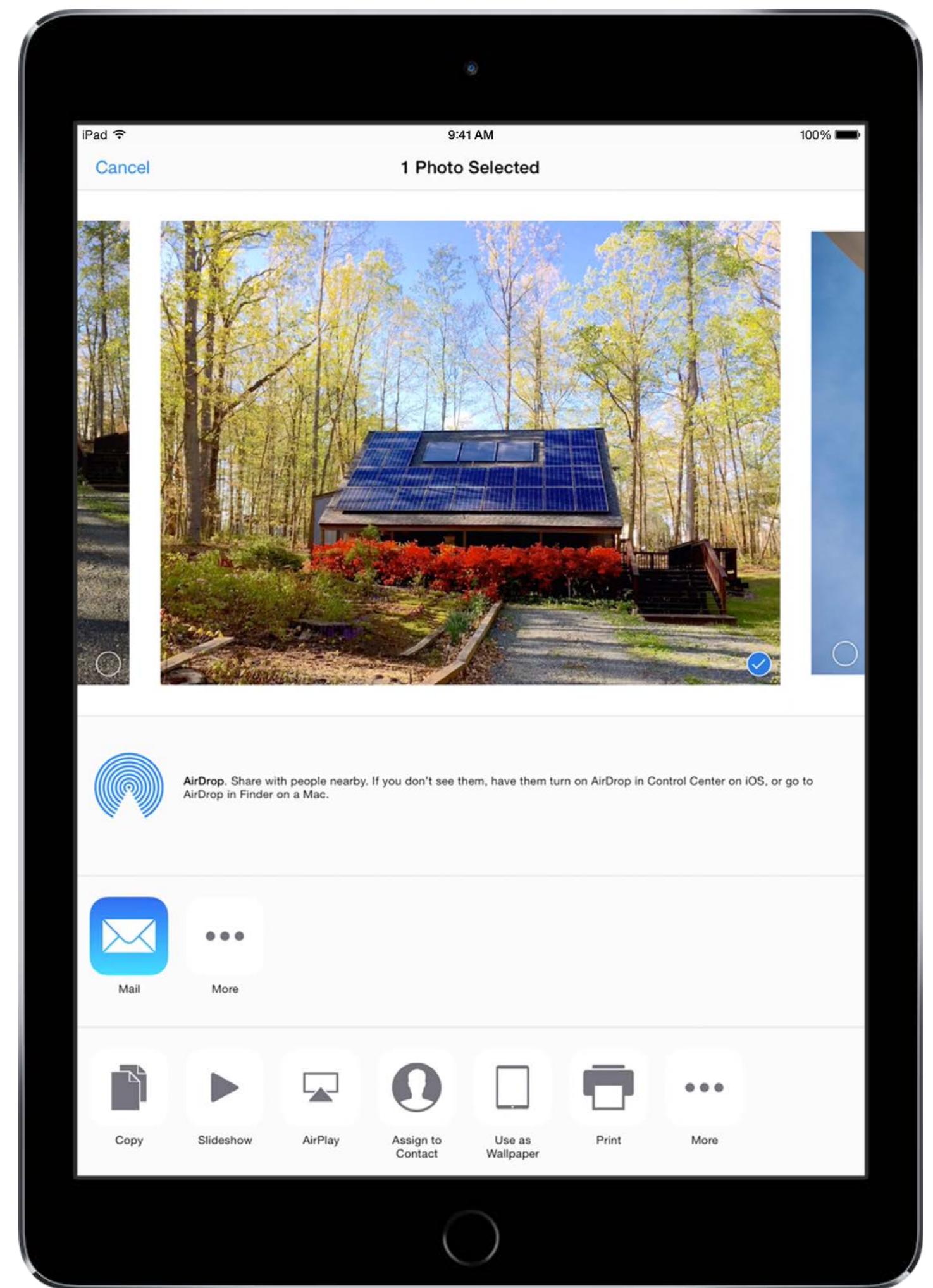


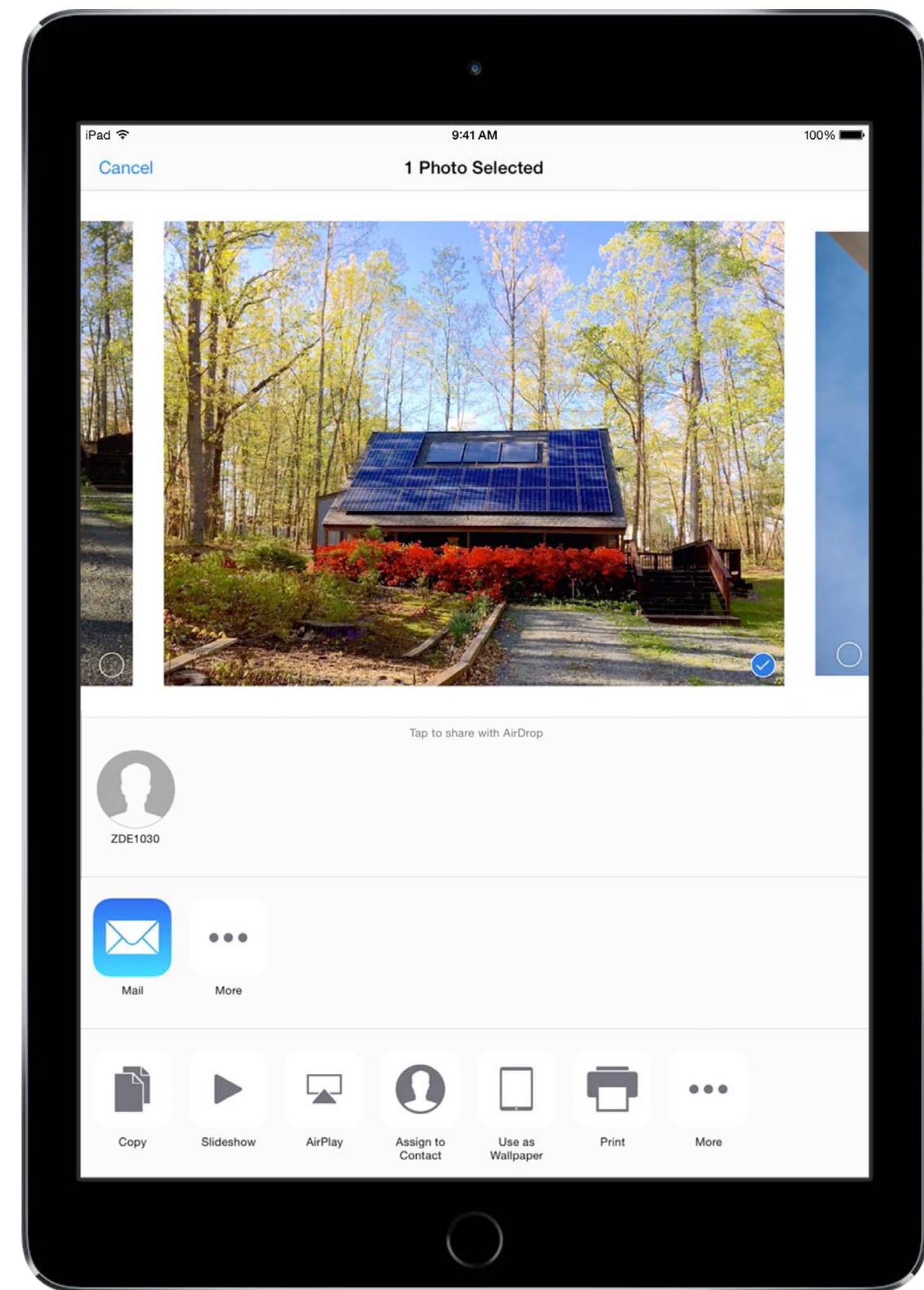


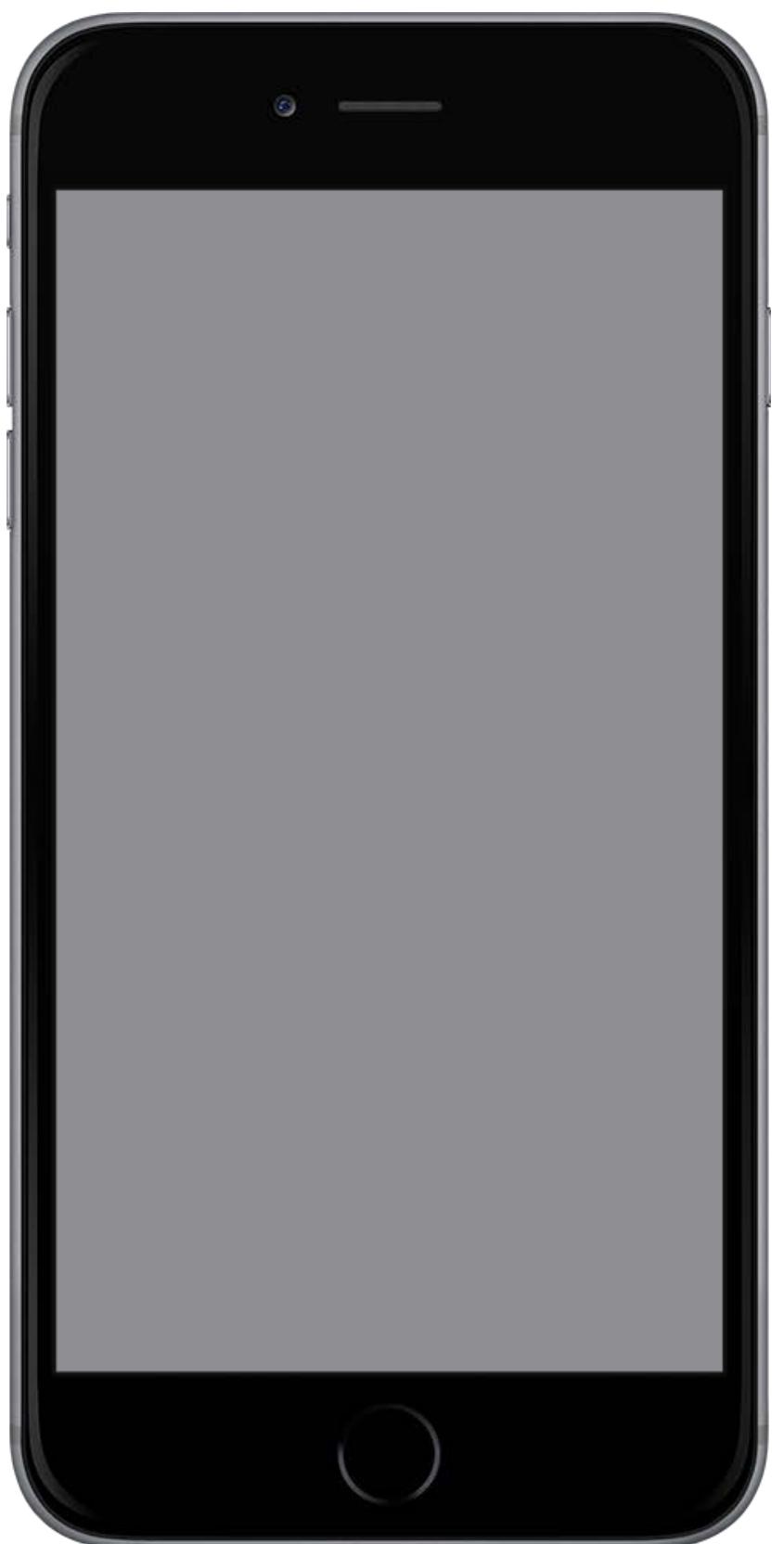
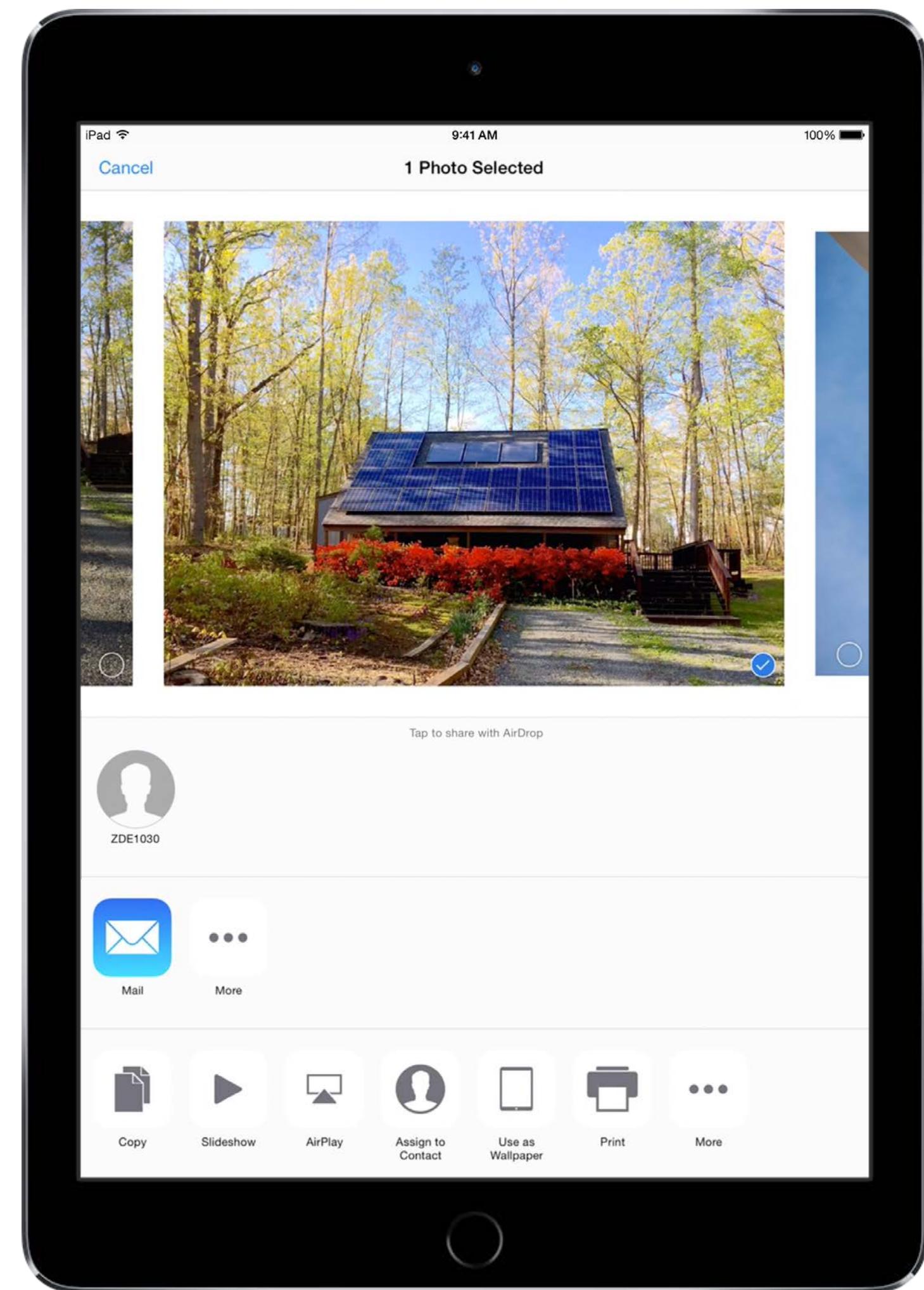


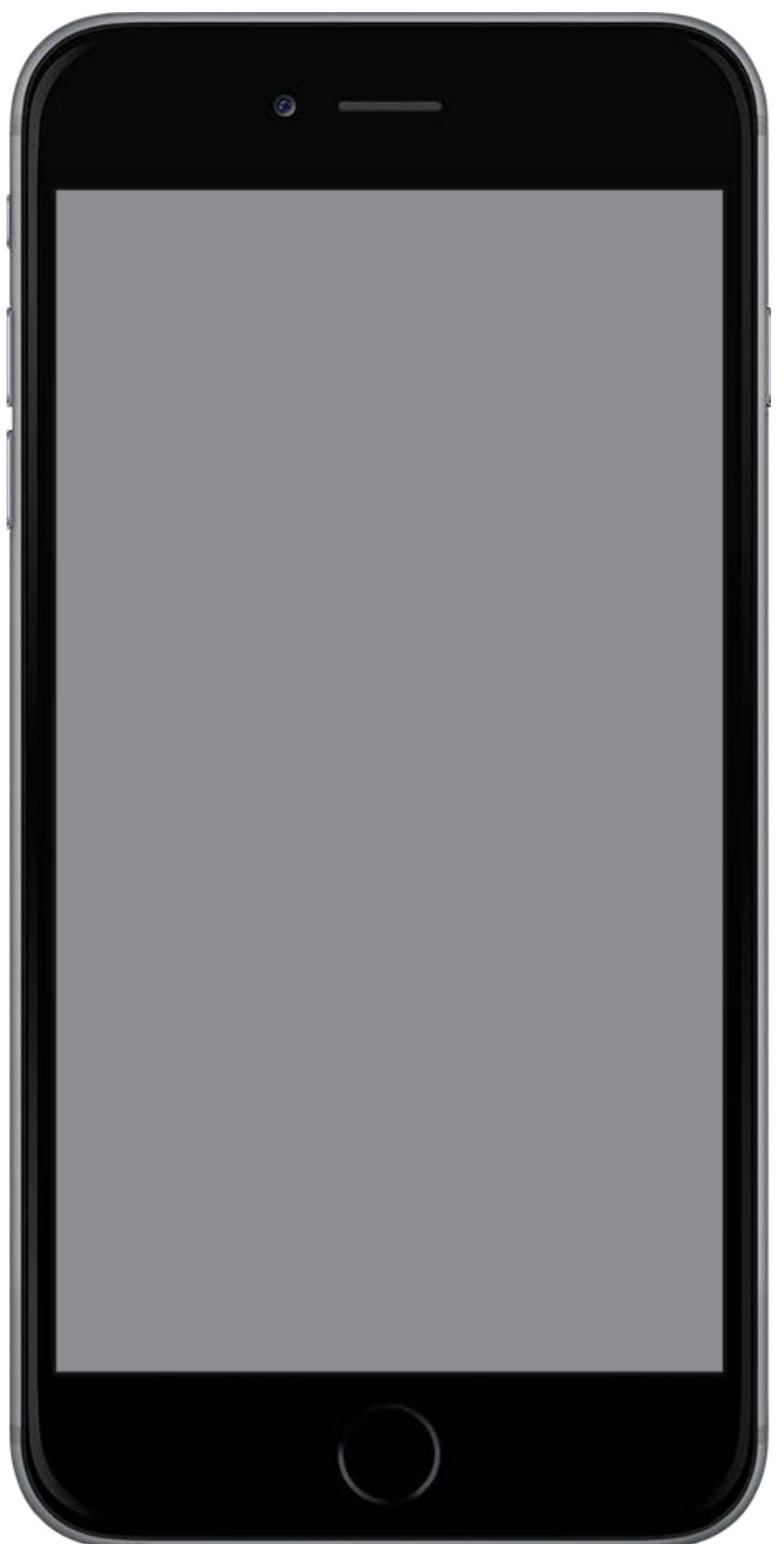
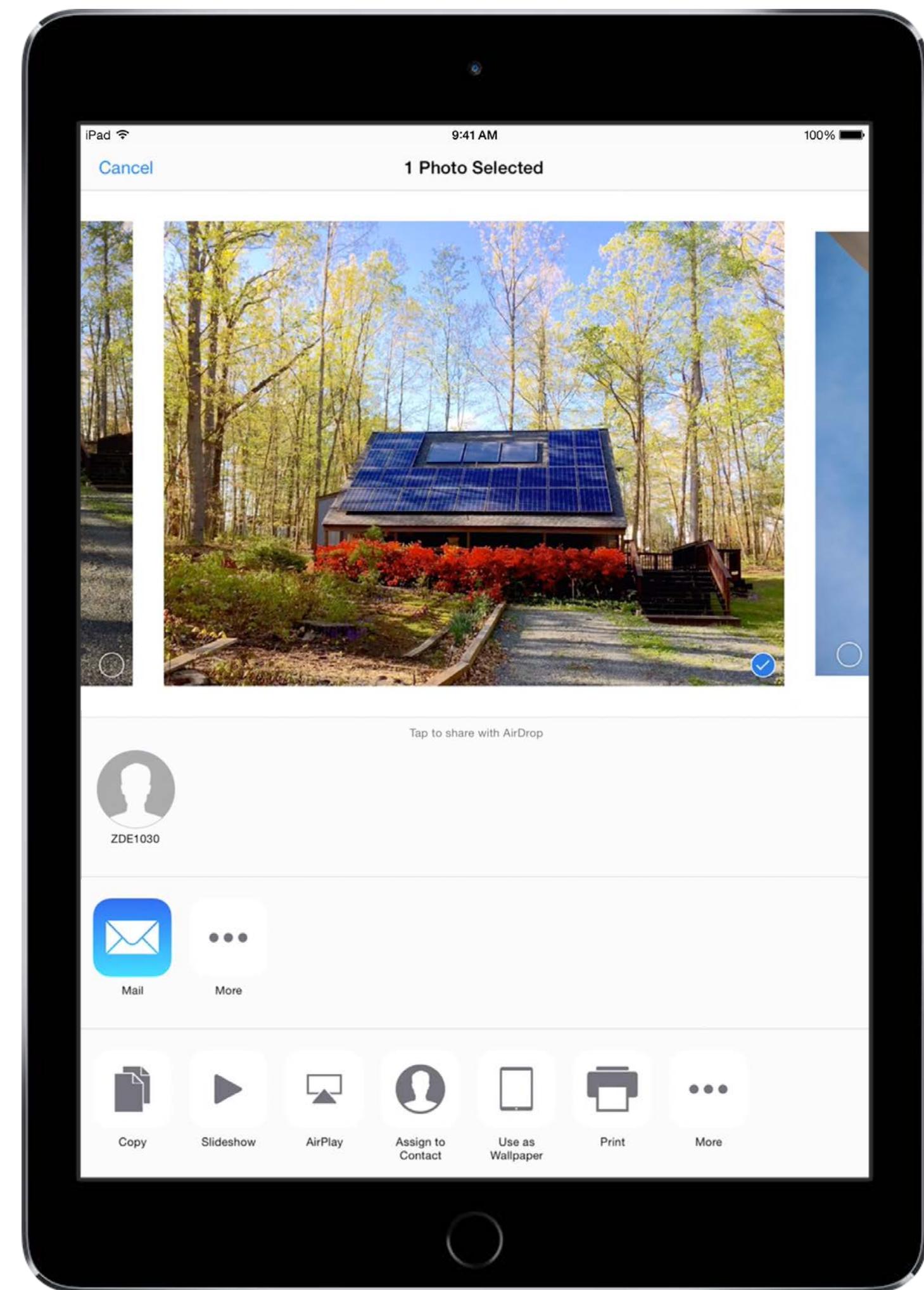


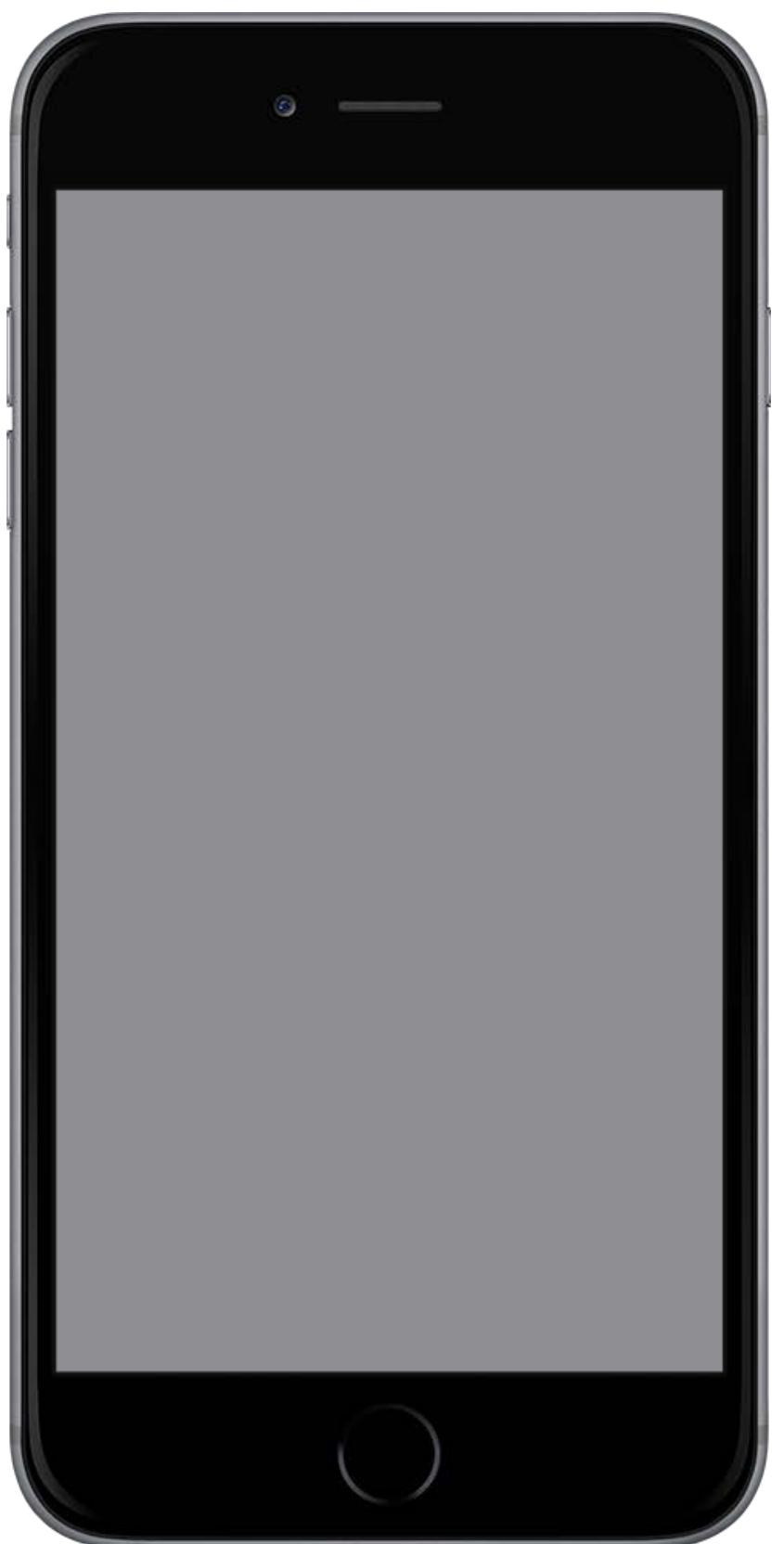
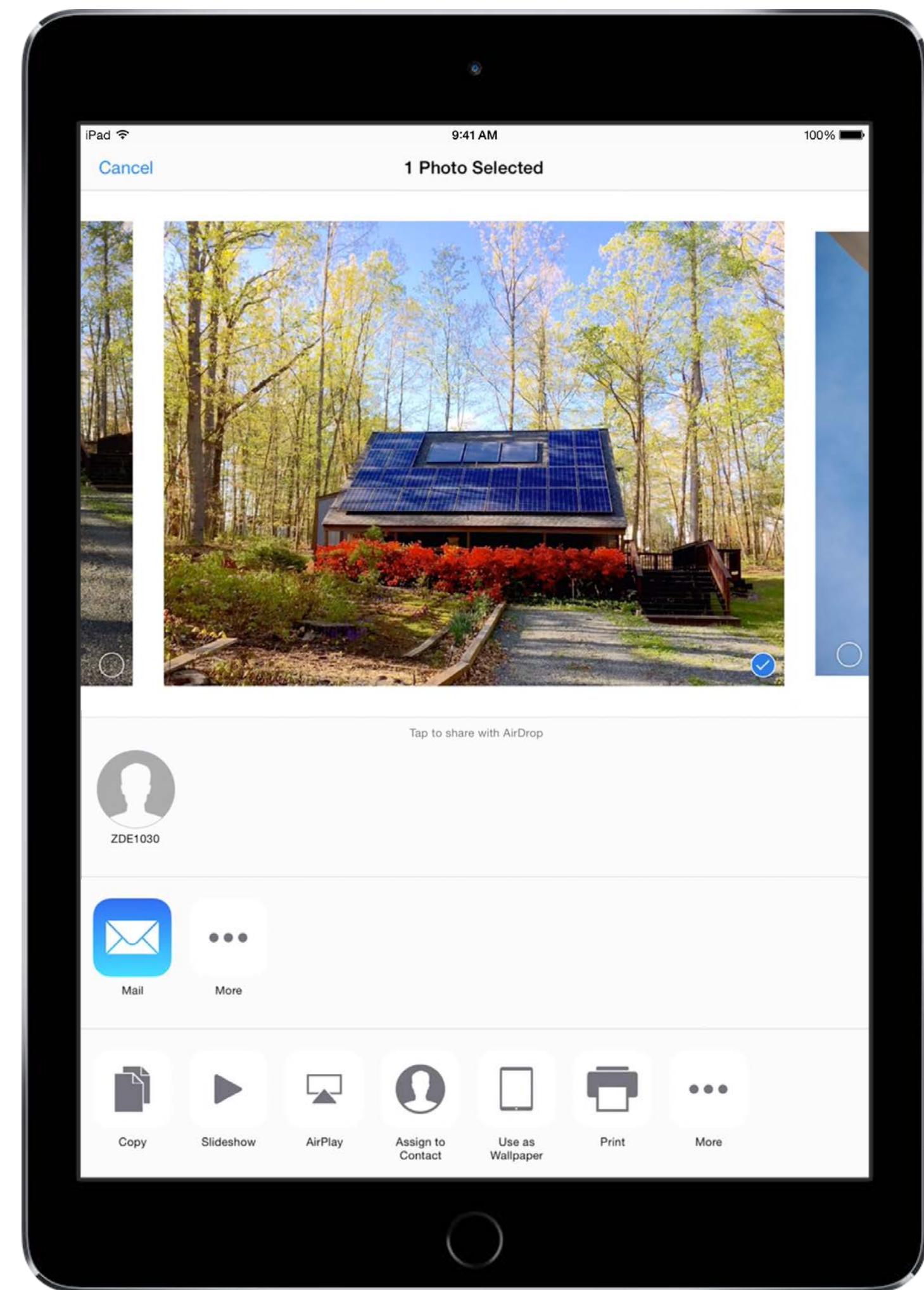


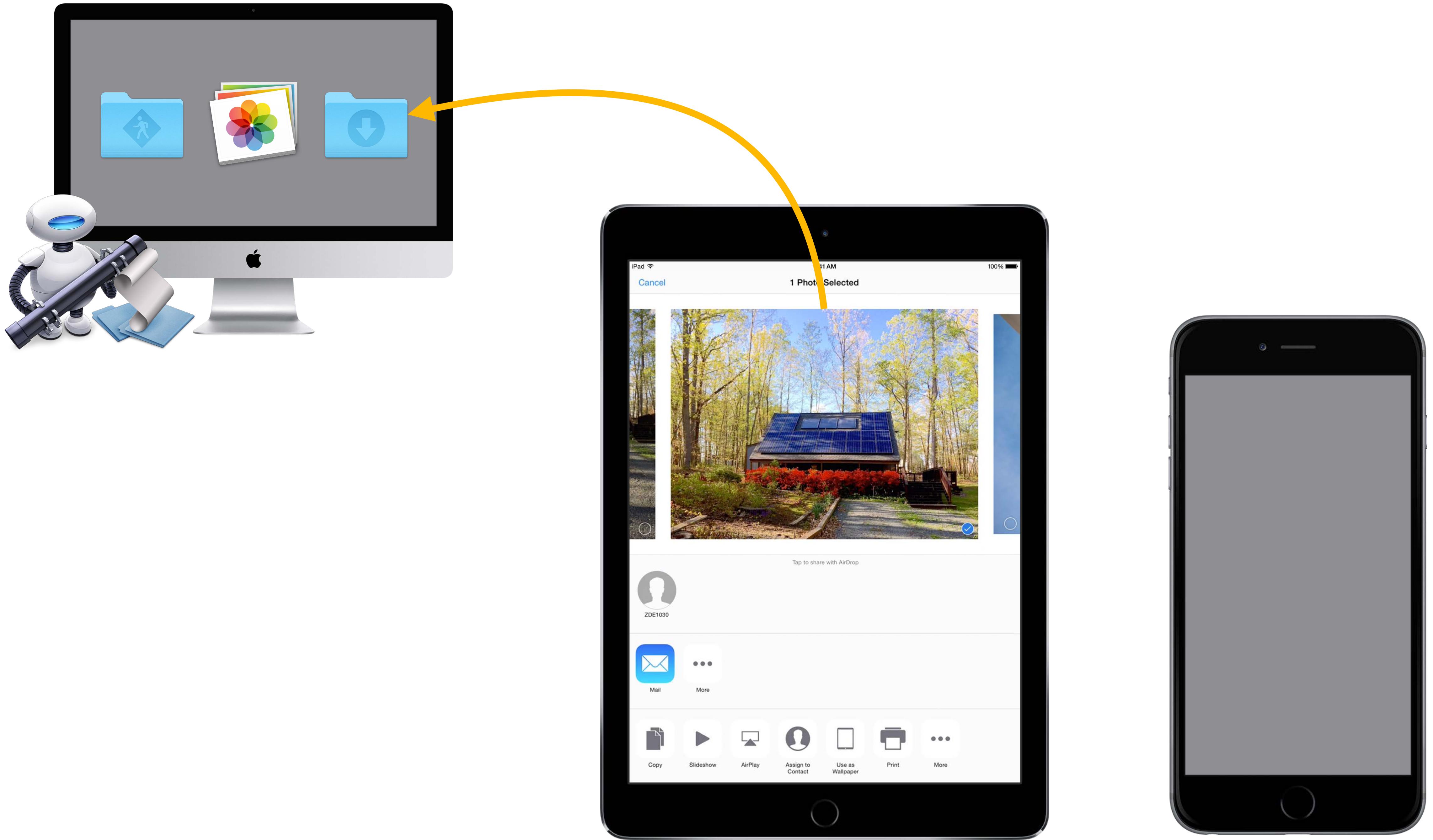


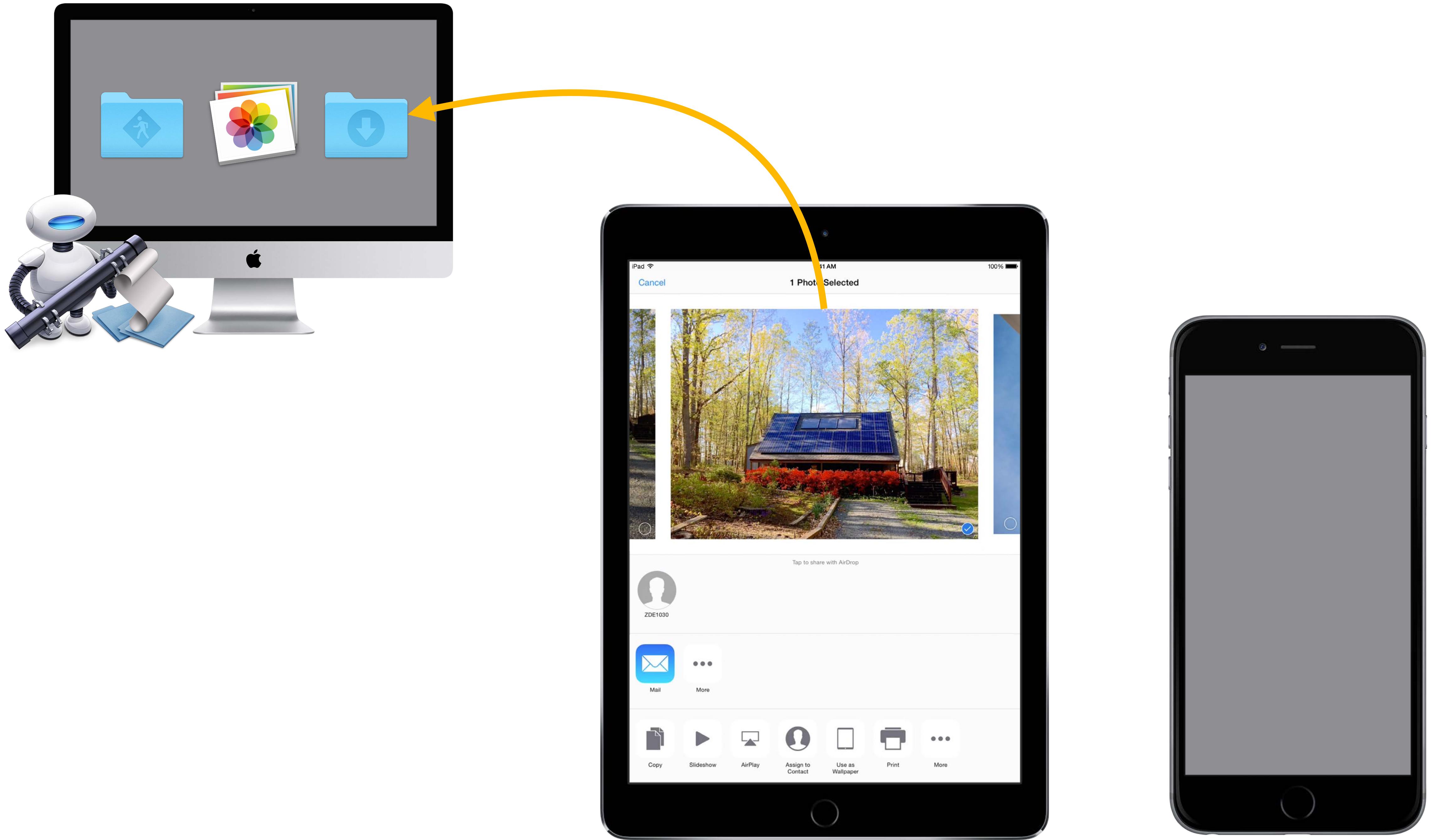


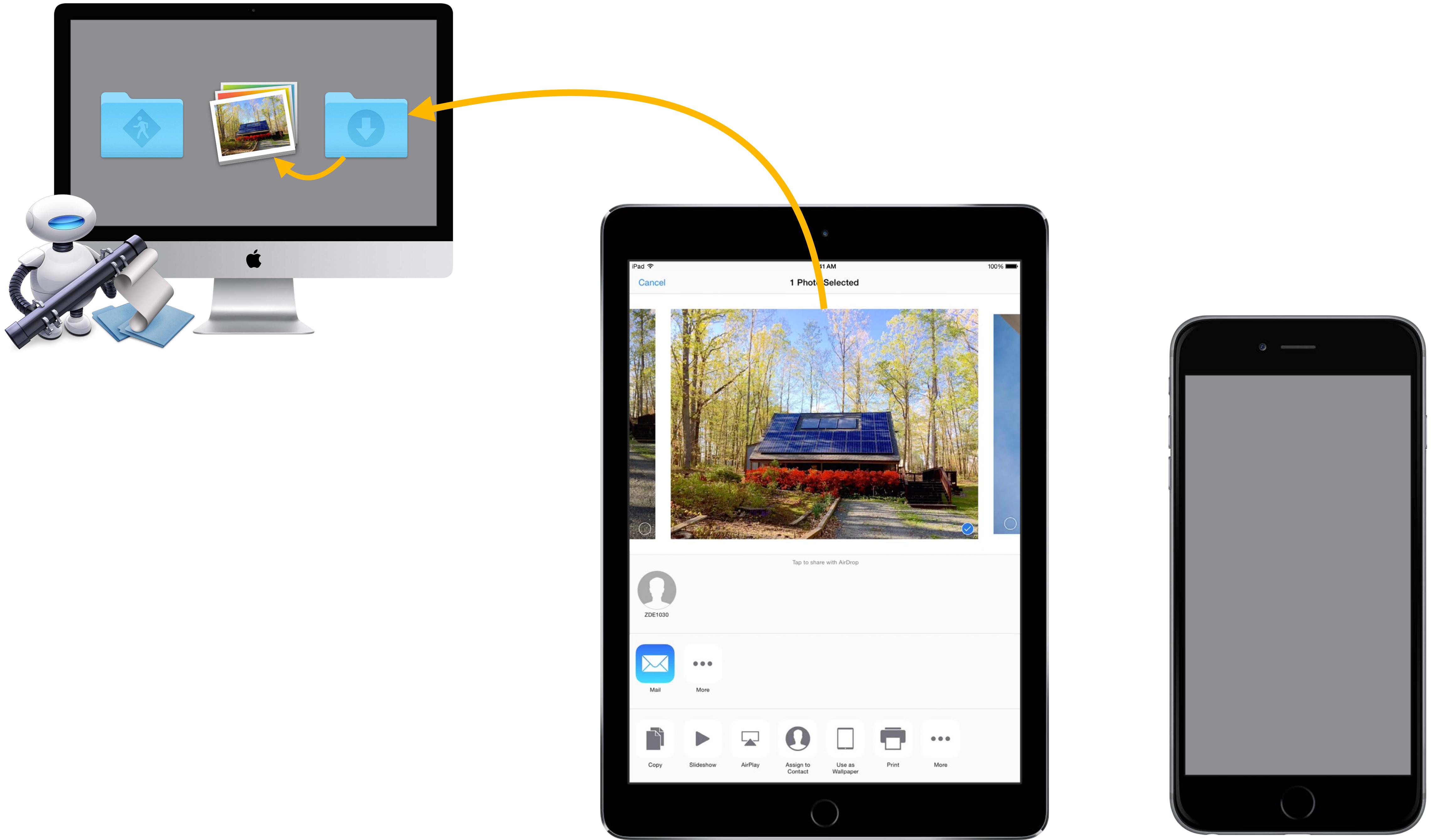


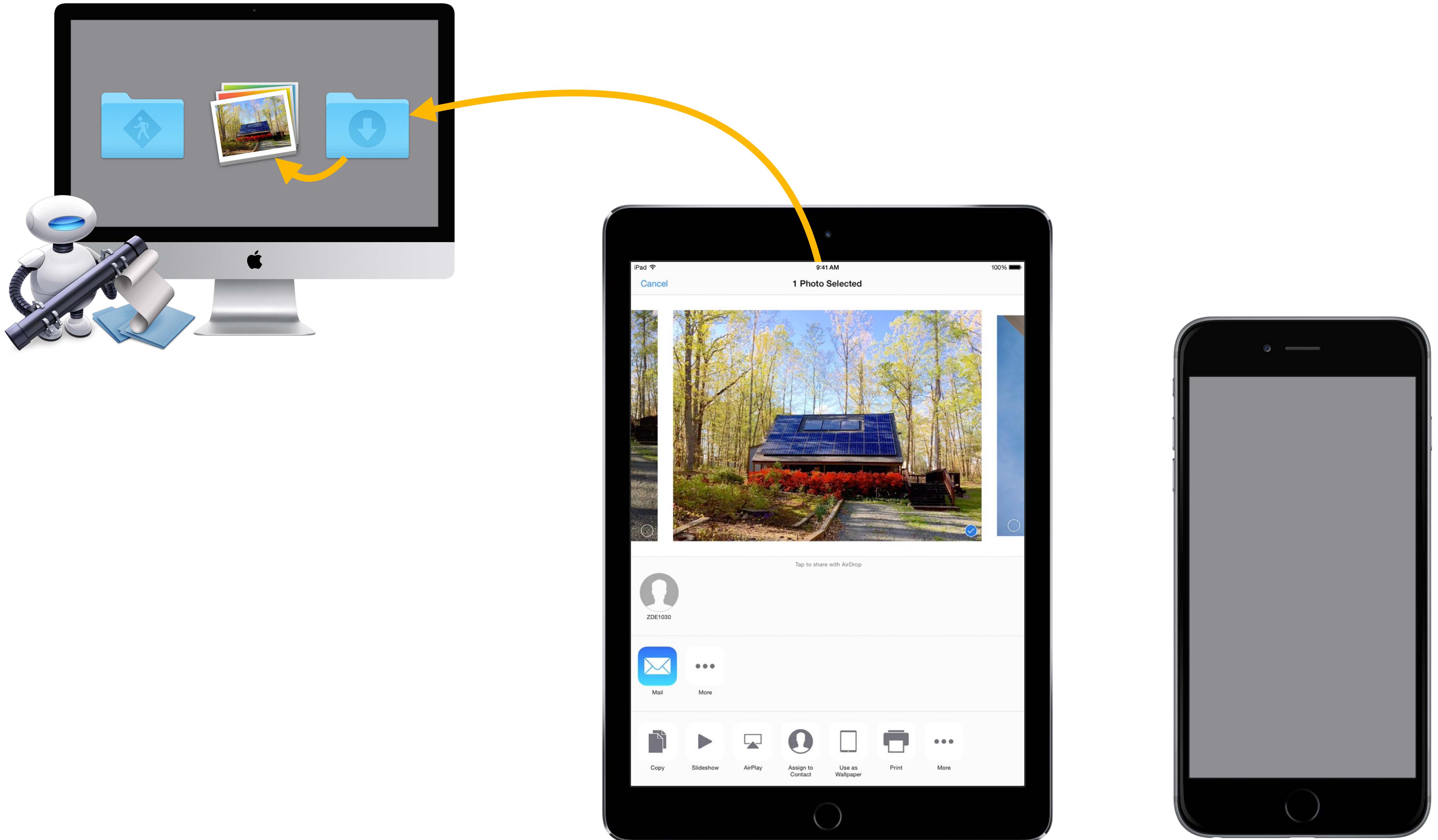


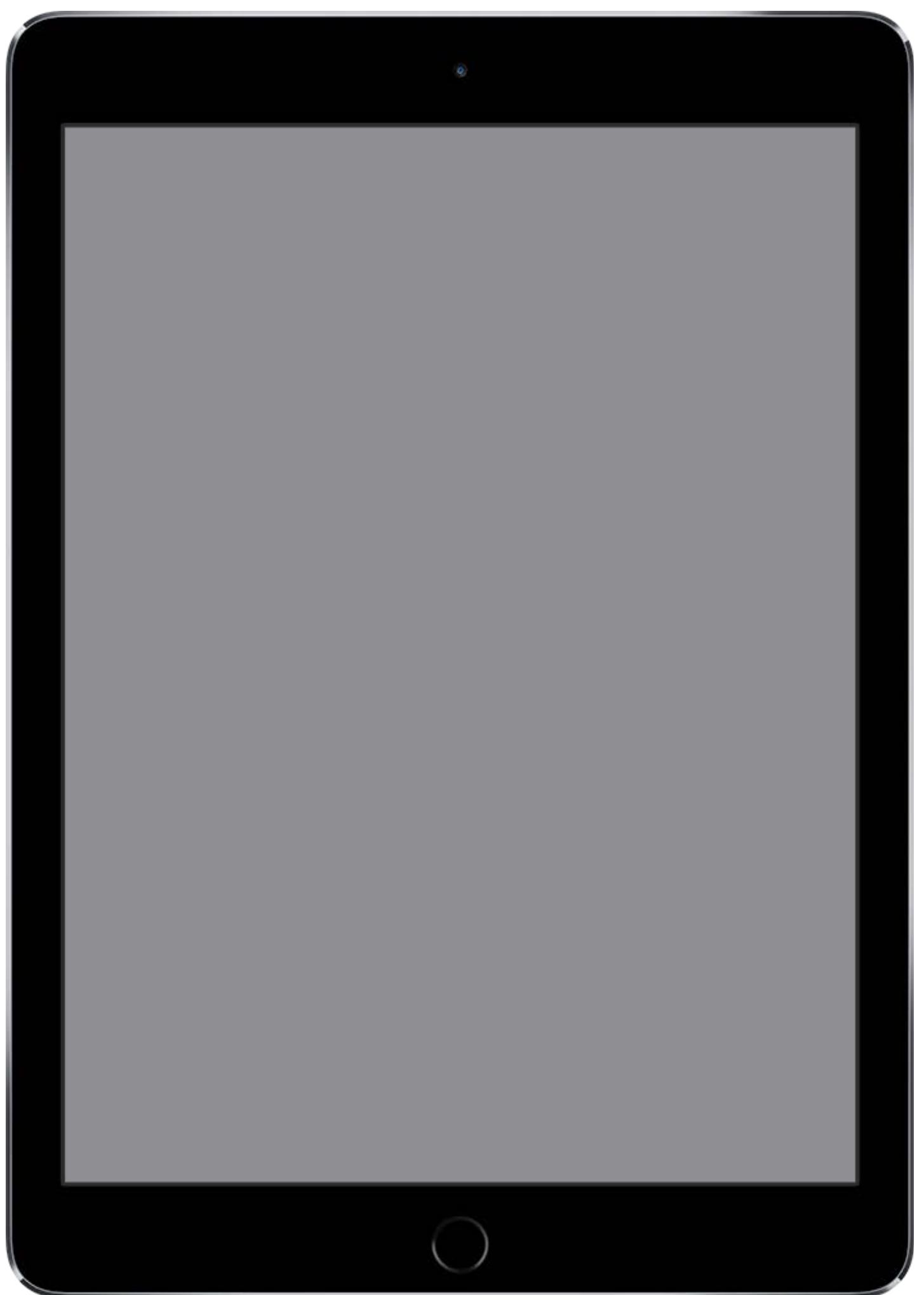
















Workgroup Image Repository

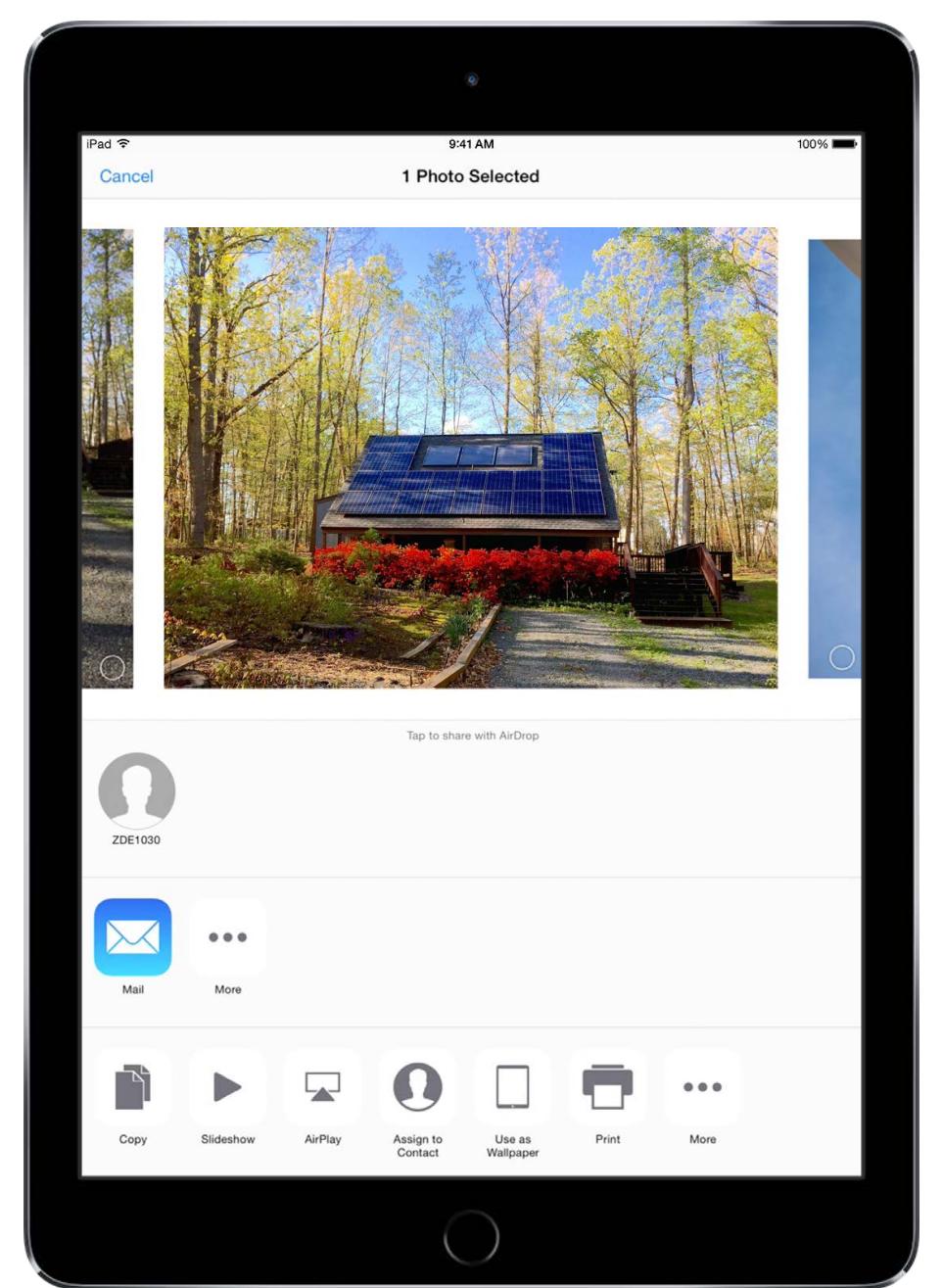
Off-cloud network file sharing

Takes advantage of built-in technologies

- File Sharing (SMB)
- AirDrop (Bluetooth, WiFi)
- Automator and Folder Actions

Works with wide-range of devices

- OS X computers
- iOS devices
- Windows-based computers (SMB)







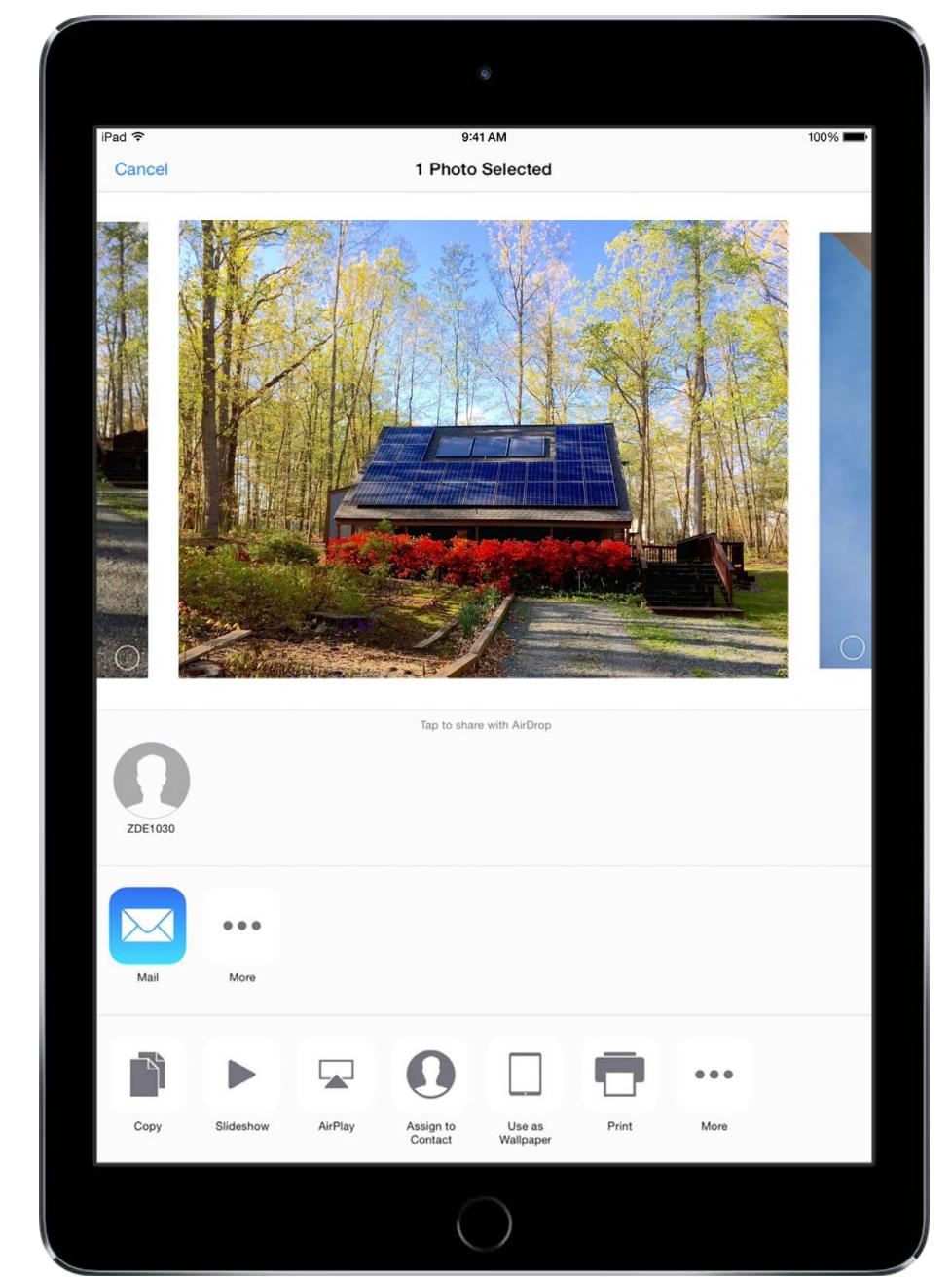
Auto-accept AirDrop applet



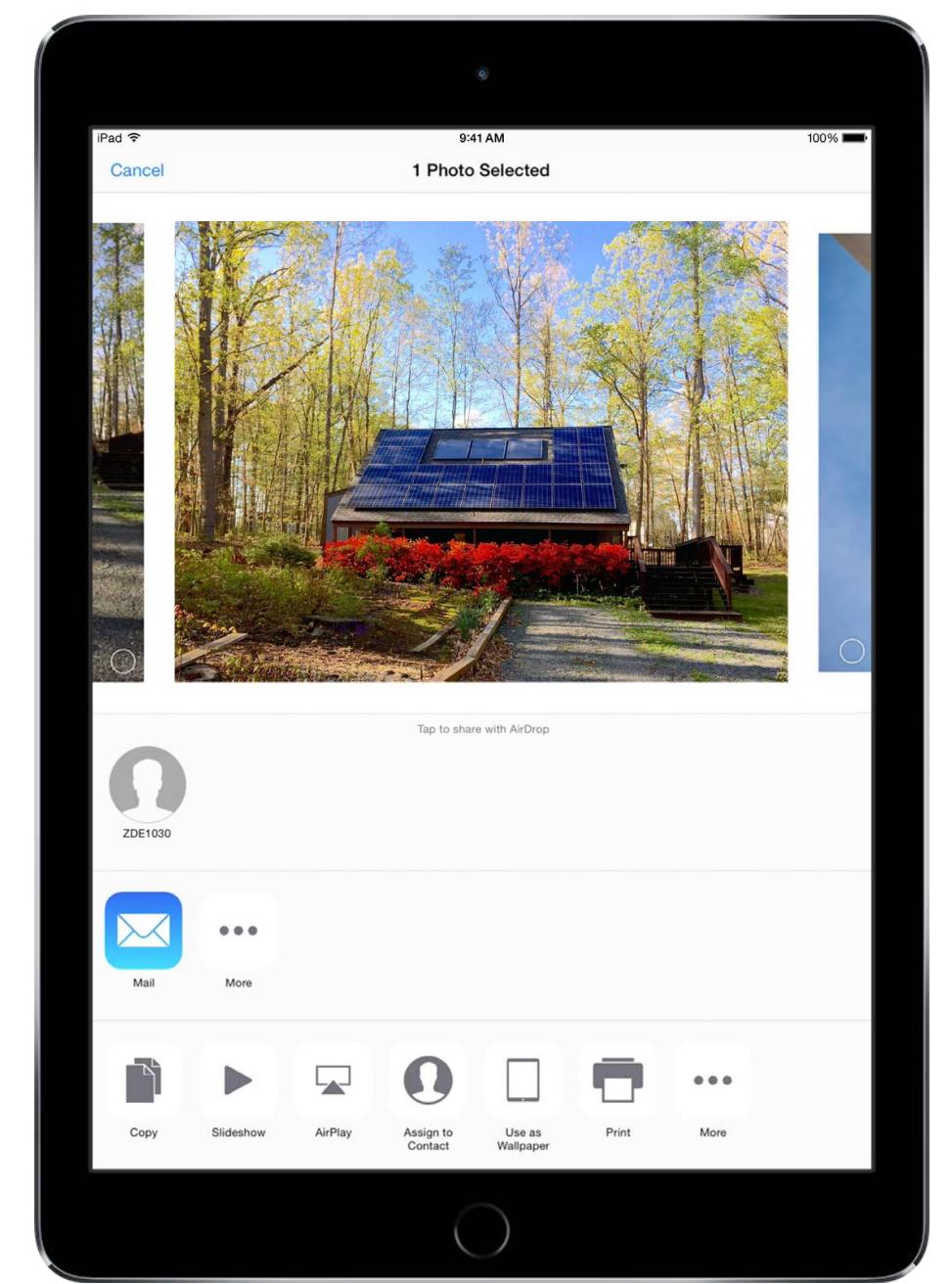
Auto-accept AirDrop applet



Auto-accept AirDrop applet



Auto-accept AirDrop applet



<https://photosautomation.com>

Automator actions for Photos in OS X

Workgroup Image Repository

Off-cloud workgroup sharing

Automating Document Construction

Creative freedom

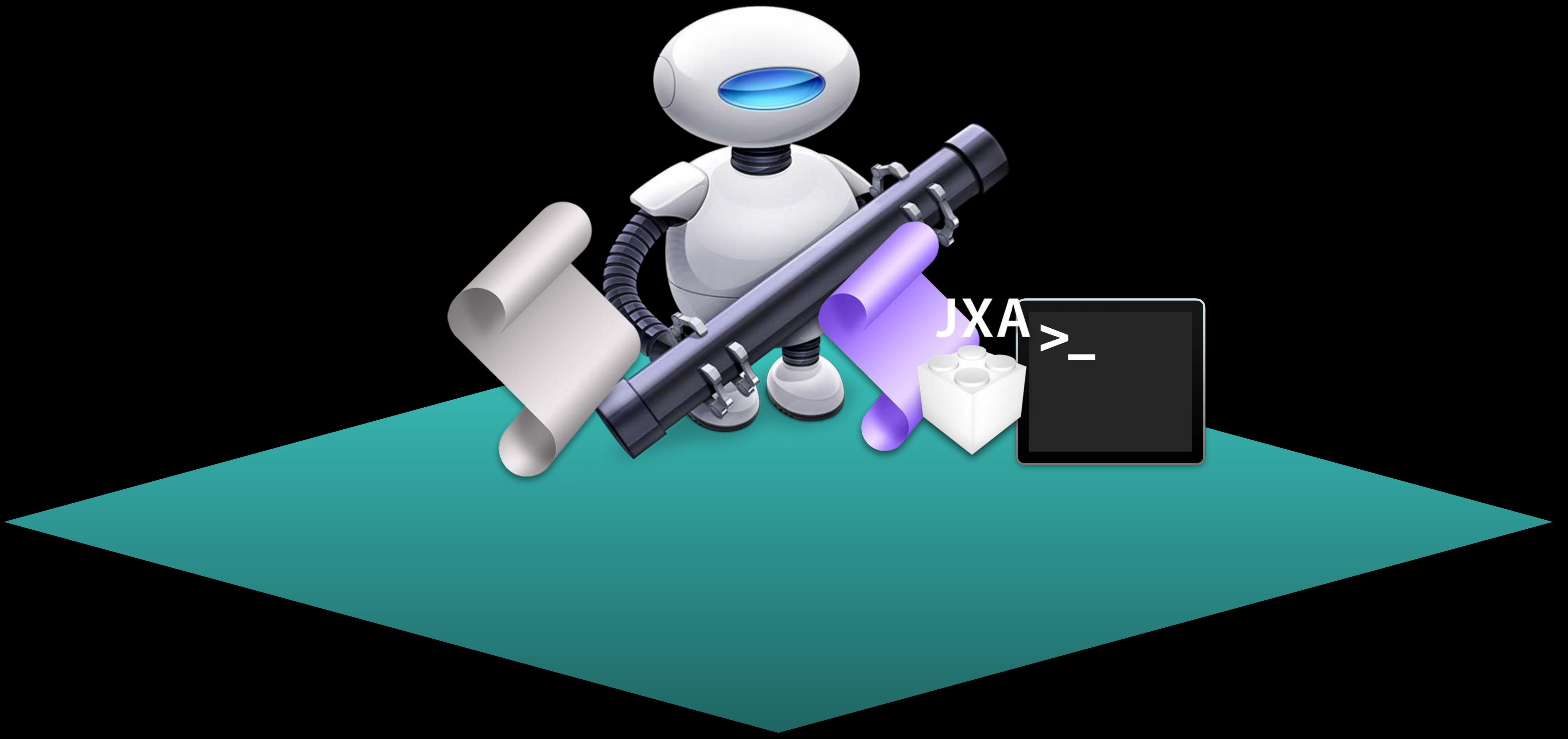
OS X Automation Technologies

Anything is possible

Automations run as the user

- Command and control applications
 - Application Object Model
 - Application interface
- Access and move data freely
- Create, duplicate, and delete documents
- Mount/unmount volumes
- Access OS and UNIX frameworks

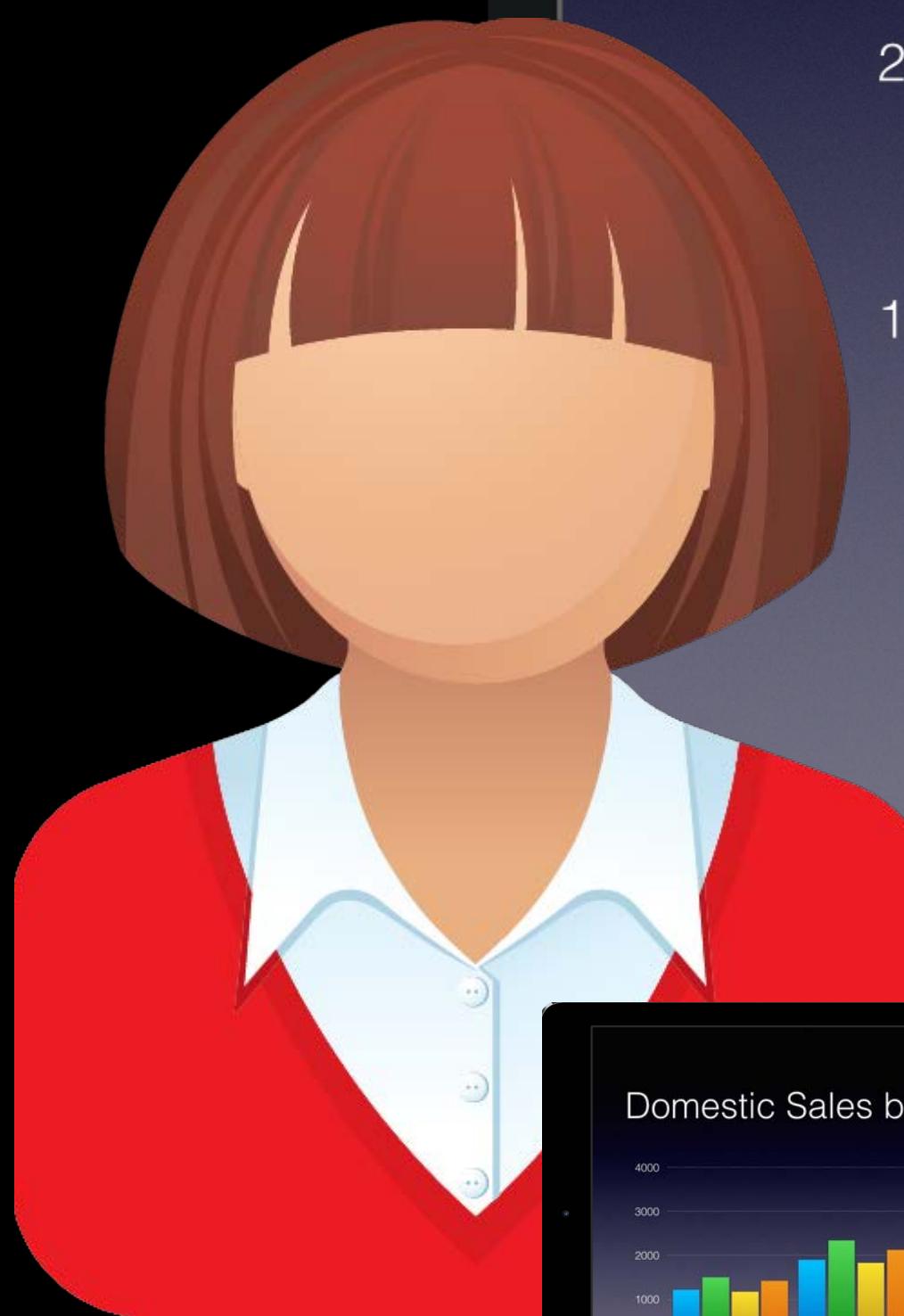




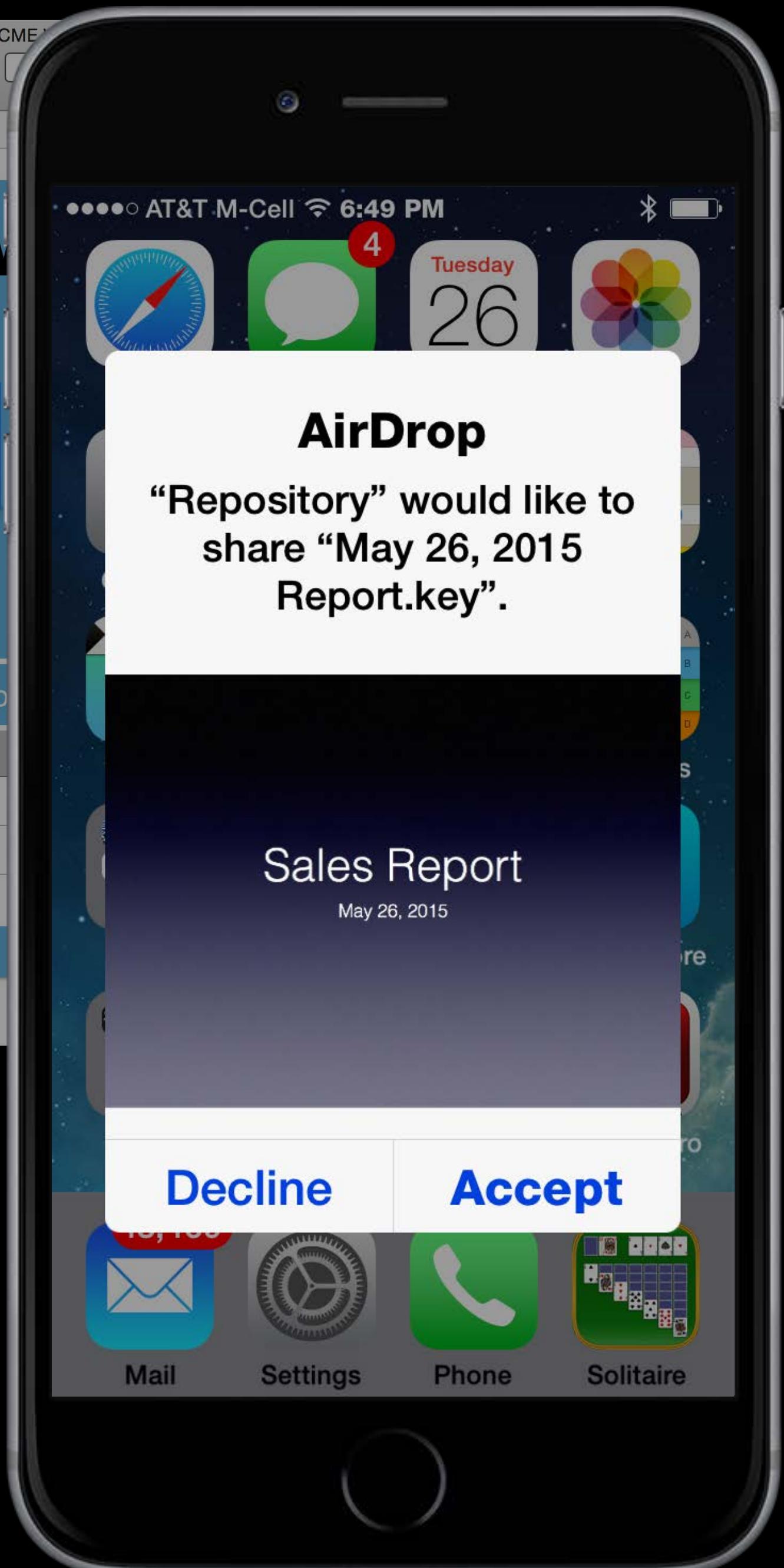
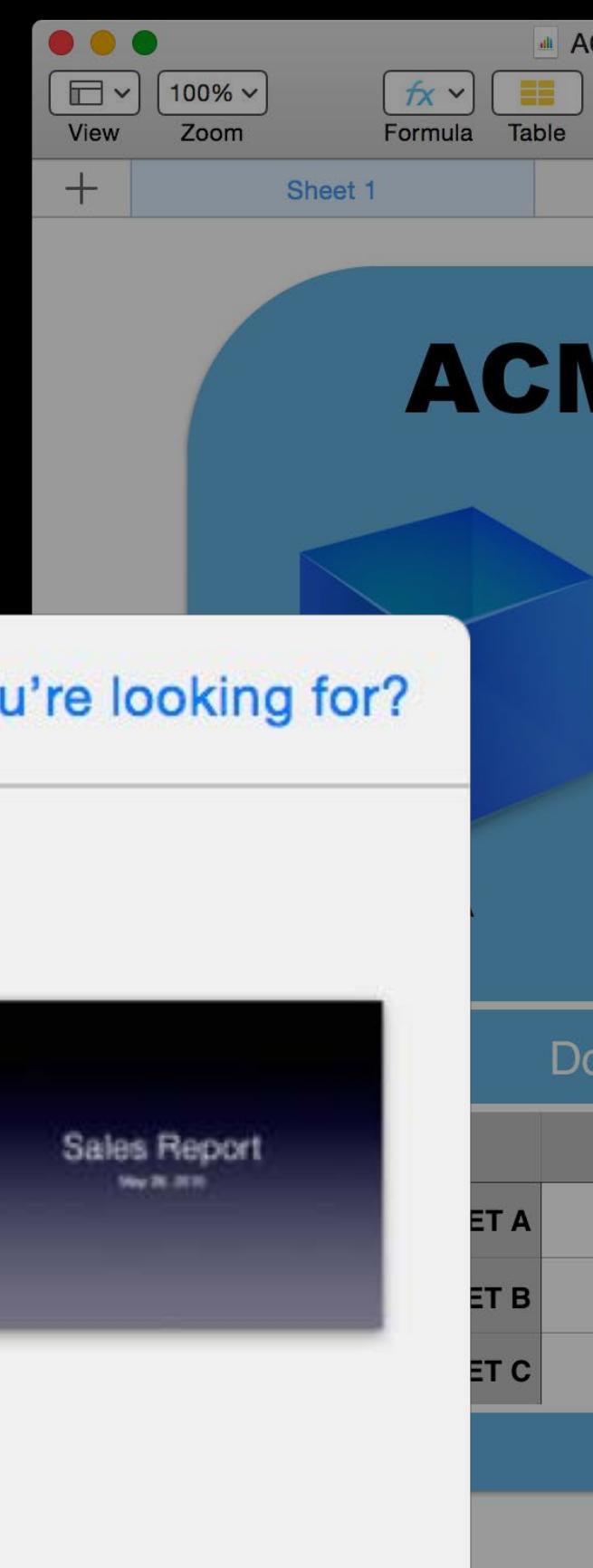
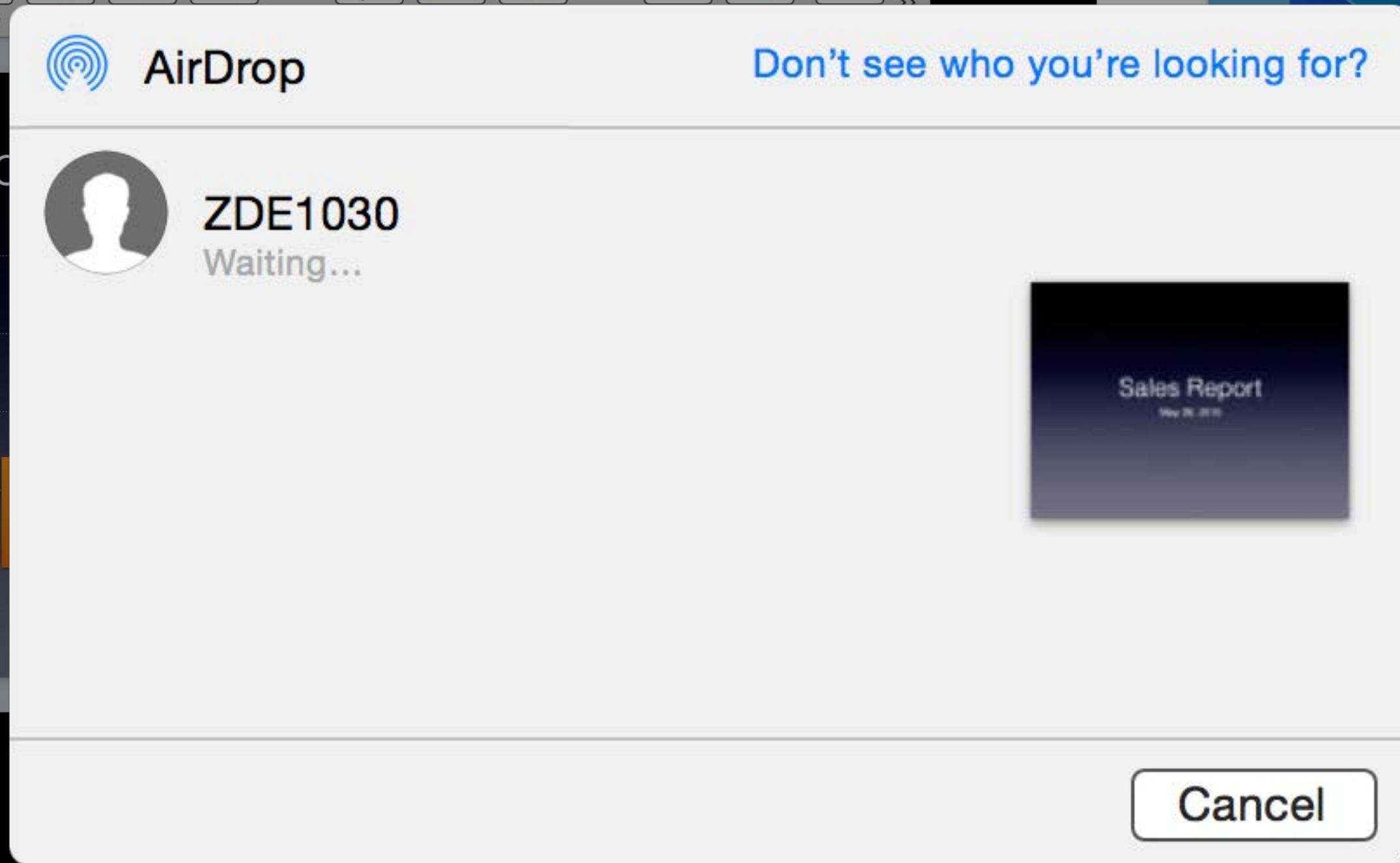
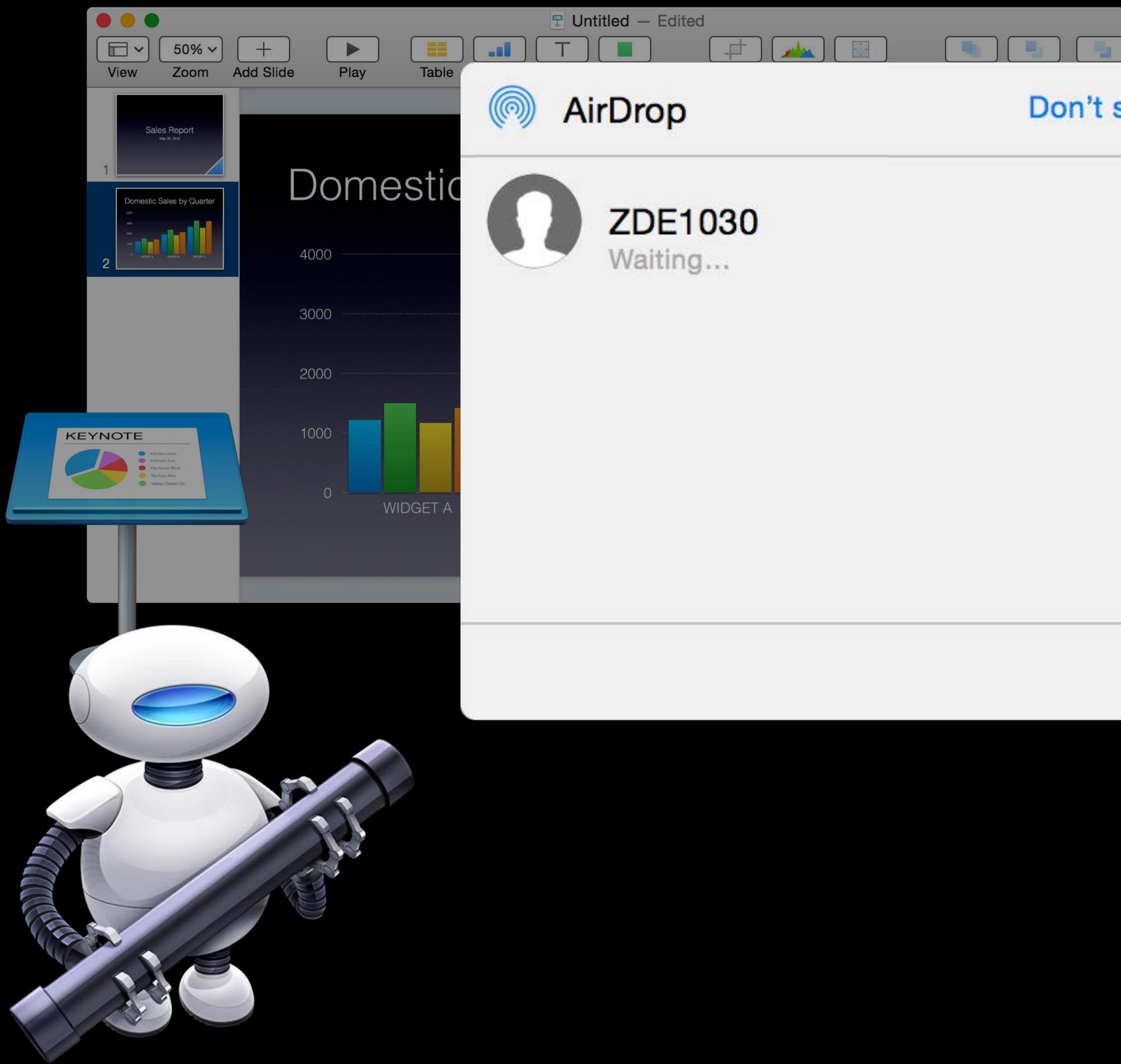


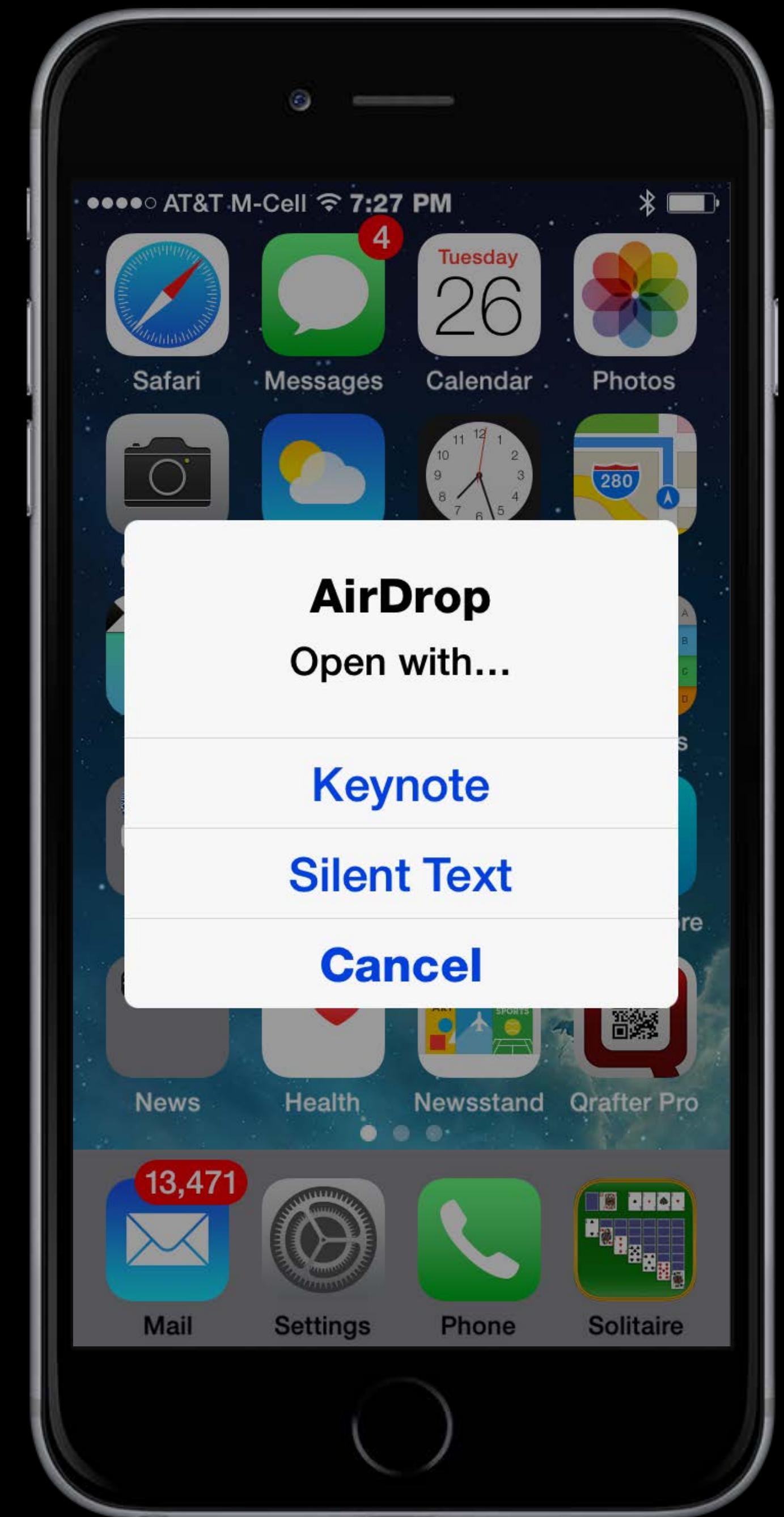


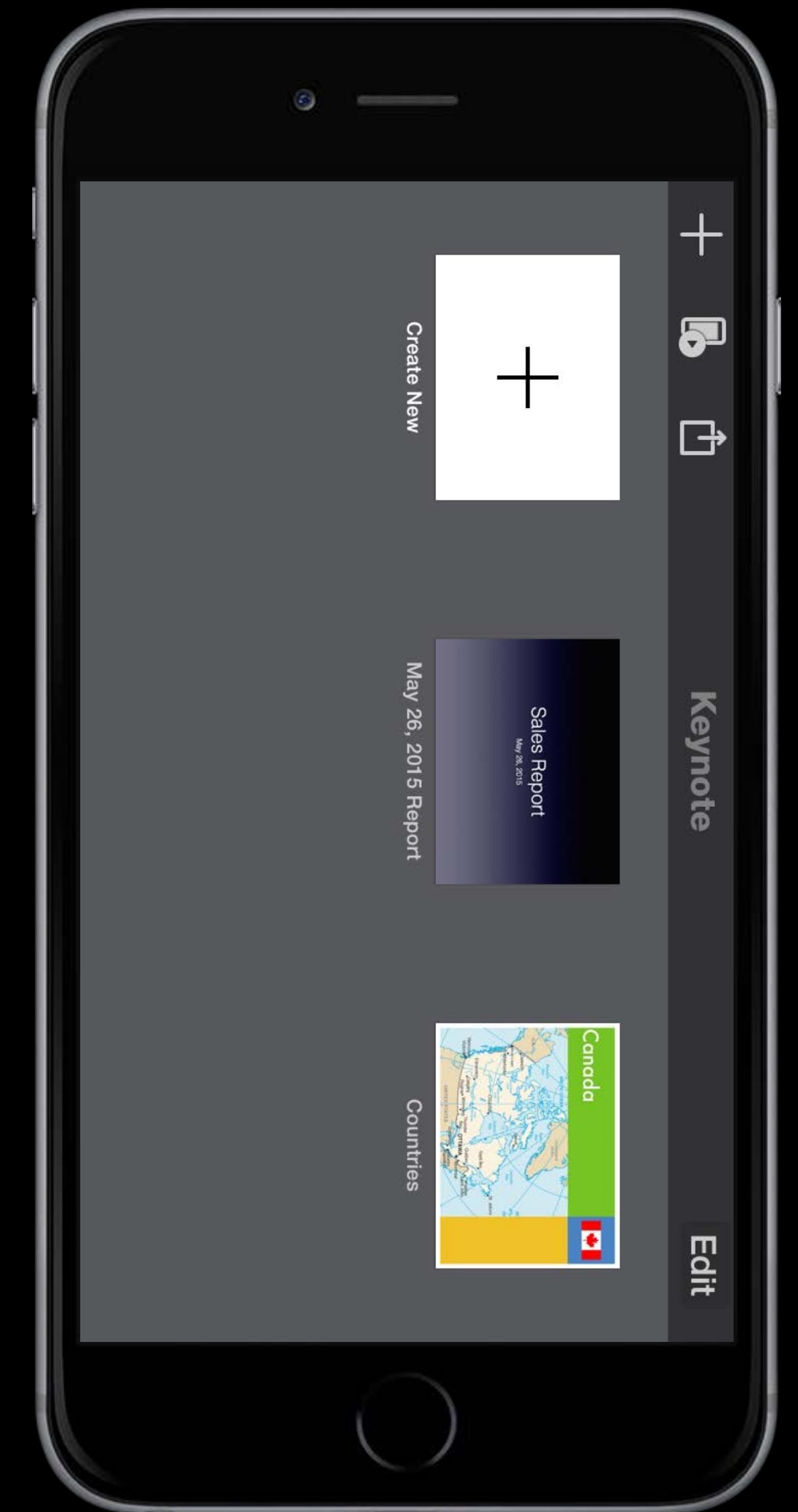
Domestic Sales by Quarter

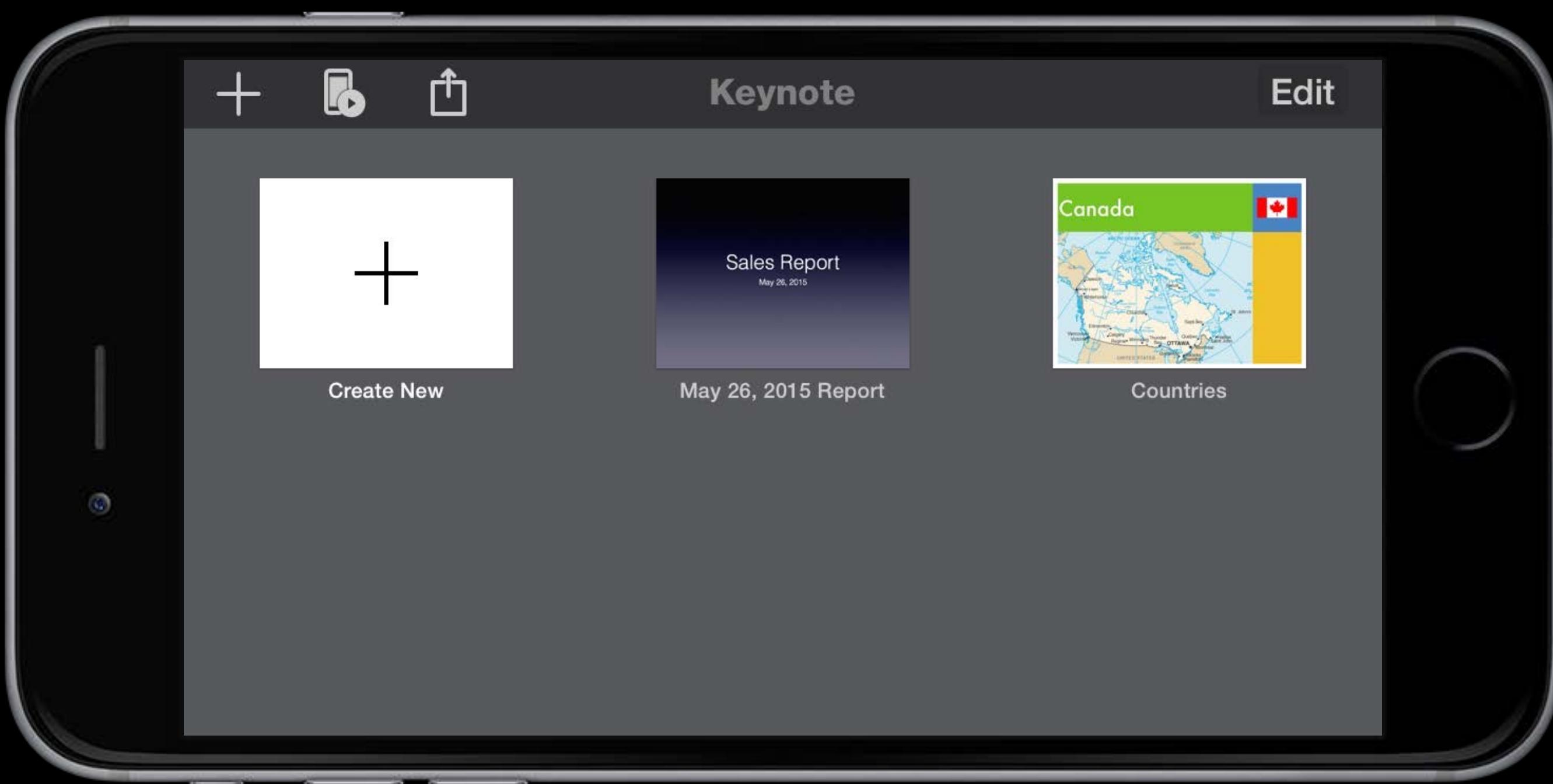






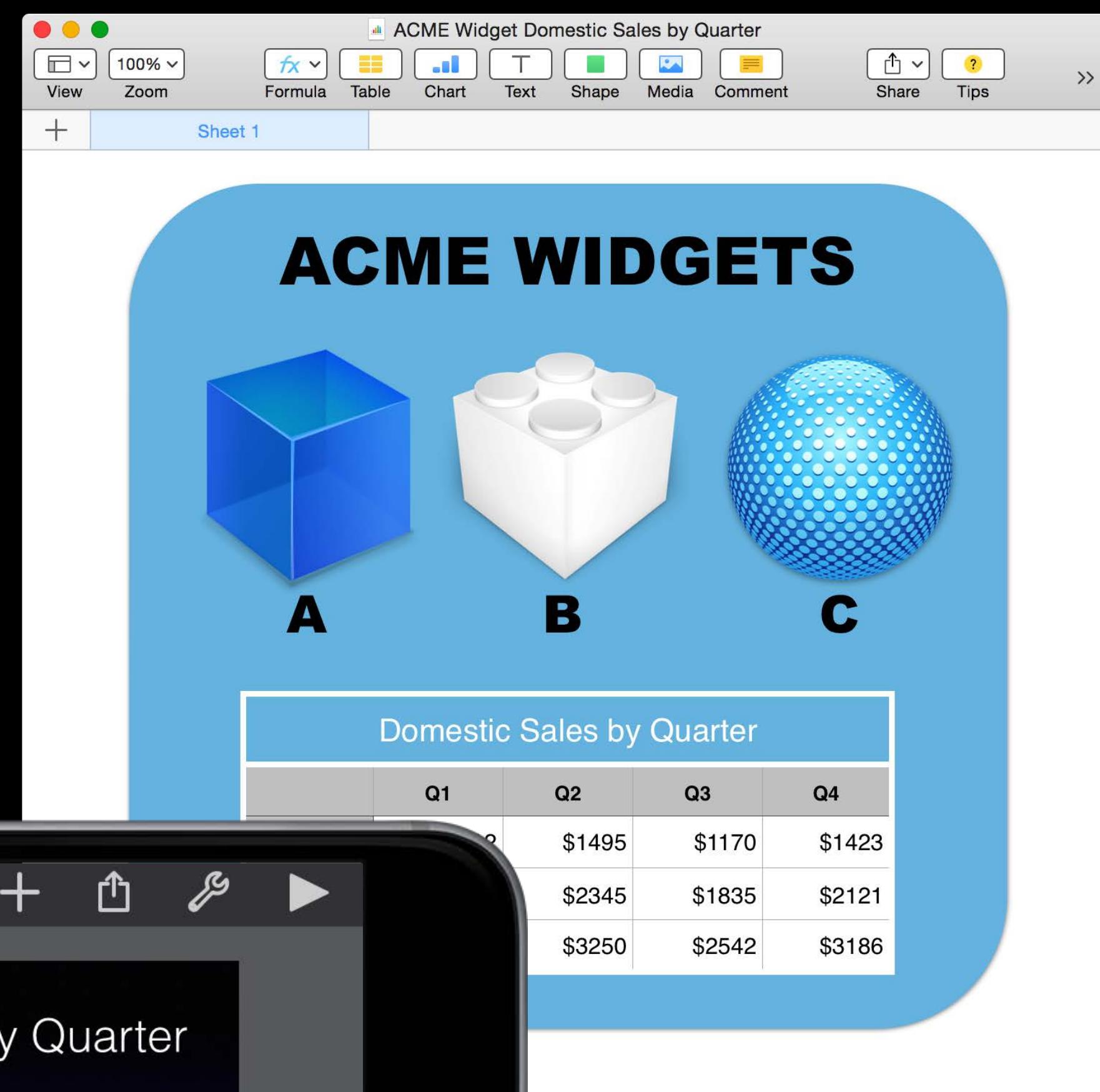


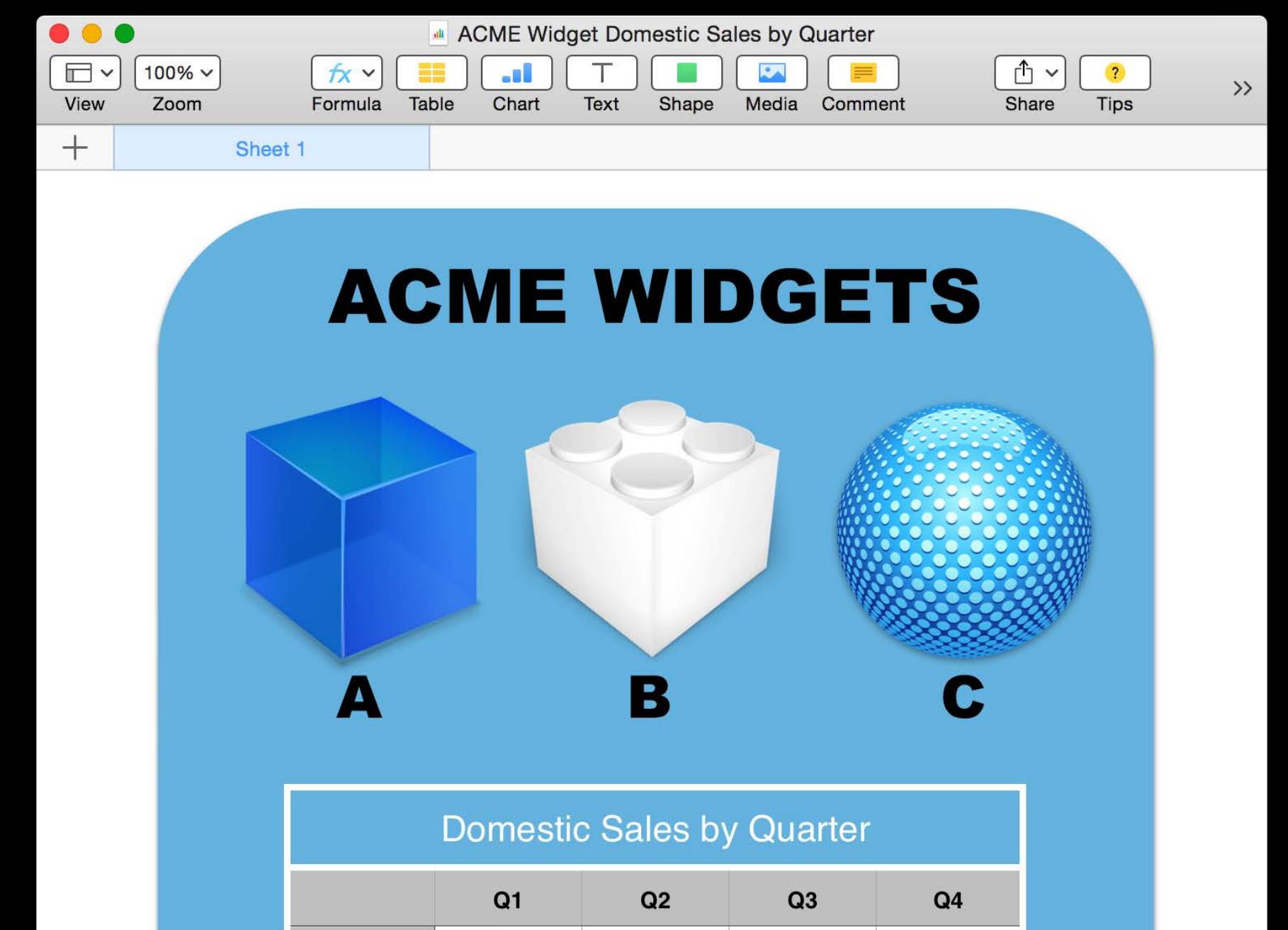












Demo

Automation and document construction

Sal Soghoian
Product Manager Automation Technologies

Automating Document Construction

Anything is possible

OS X provides a complete range of automation technologies

- AppleScript (AppleScriptObjC)
- JavaScript for Automation (JXA)
- Automator
- UNIX CLI

Scriptable applications

- iWork and Photos
- Finder
- FileMaker Pro

<https://iworkautomation.com>

AppleScript and Automator automation for iWork

Automating Document Construction

Creative freedom

Automating the Setup of iOS Devices

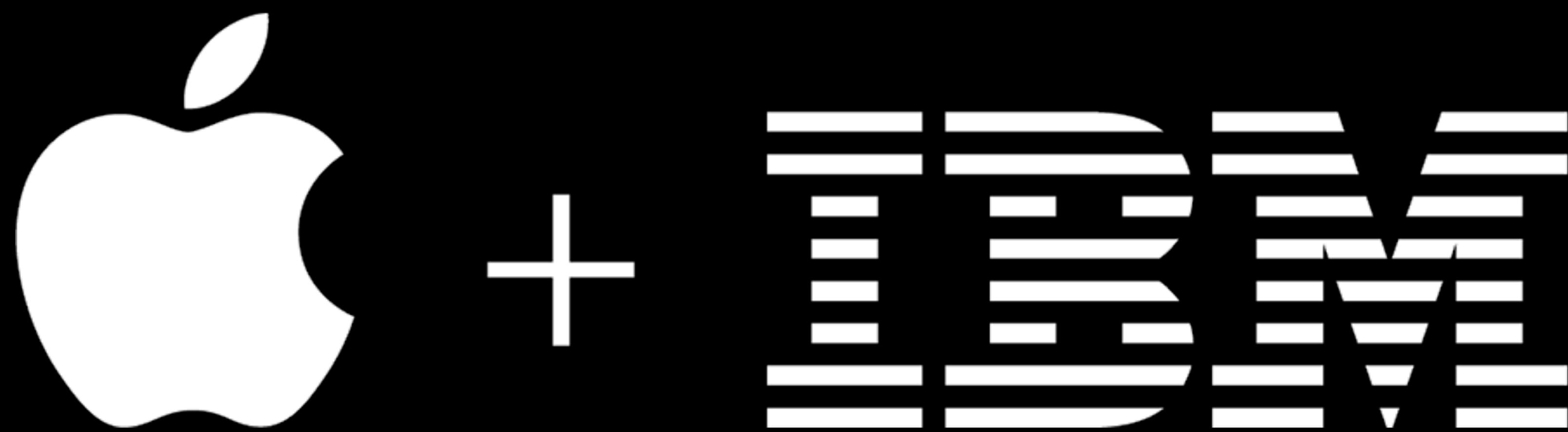
Device preparation for the “Accidental Administrator”













Data deployment





The image shows three mobile devices (an iPad and two iPhones) demonstrating various features of a financial management application.

iPad Screen (Client List - Portfolio):

- Header:** iPad, 9:41 AM, 100% battery.
- Top Bar:** Client List, Portfolio, Sign Out.
- User Profile:** Jon Wiita (Client since 1995, Moderate Risk Profile).
- Performance Graph:** Shows portfolio value from Oct 2013 to Aug 2014, comparing against S&P 500, Dow Jones, and "People like me".
- Portfolio Summary:** Value: \$2,332,277.75.
- Accounts:** Investment Account: \$930,206.57, IRA Retirement: \$1,401,385.98, Cash Account: \$685.20.
- Holding Alerts:** Large-Cap Company IDX - Market Event, INTL REALESTATE IDX - News Event.
- Bottom Navigation:** Portfolio, Scenarios, Vault.

iPhone Screen (Client Detail - Jennifer Martin):

- Header:** Category: All Alerts (25), 9:41 AM, 100% battery.
- Client Info:** Jennifer Martin, Account Since: '11, Account # 005, FA# 001.
- Segment:** HNW (High Net Worth).
- Opportunity Size:** \$15-20M.
- Lead Rating:** 8.
- Action Buttons:** Approve, Delegate, Postpone, Act.
- Details:** Jennifer Martin, EVP Strategy of ABC Enterprises, holds shares estimated to be worth \$15-20M following IPO and has 6 client connections.
- Recommendations:** Create Case Team to prepare proposals, Request introduction from mutual connection.

The image displays three mobile devices (an iPad and two iPhone models) illustrating a financial management application interface.

iPad Client List (Top Left):

- Header: iPad WiFi, 9:41 AM, 100% battery.
- Section: Client List.
- User Profile: Jon Wiita (Client since 1995, Moderate Risk Prof).
- Section: Portfolio.
- Summary: Value \$2,33.
- Section: ACCOUNTS.
- Investment Account: \$93K.
- IRA Retirement: \$1,400.
- Cash Account.

iPad Alerts & Approvals (Middle Left):

- Header: iPad WiFi, 9:41 AM, 100% battery.
- Section: Alerts & Approvals.
- Counters: All 25, New Business 4, Advice 12, Retention 9, Delegated 27, Completed 48.
- Grid of client profiles:

 - Jennifer Martin: \$15-20M Opportunity Size, HNW Segment, Lead Rating 8. Status: New Lead. Description: Jennifer Martin, EVP Strategy of ABC Enterprises, holds shares estimated to be worth \$15-20M following IPO and has 6 client connections. Actions: Delegate, Postpone, Act.
 - Kim Kilgo: \$12M Client Assets, \$23K Revenue, Account Since '94. Status: Client Satisfaction Issue. Description: The client expressed dissatisfaction on a 11/7 call with call center. Topic: Online Account Access. More info. Actions: Delegate, Postpone, Act.
 - Ian Craigmire: \$80K Client Assets, \$970 Revenue, Account Since '11. Status: New Account Approval. Description: USU pending approval for Account #0389-4146-242. (Branch# 005, FA# 001). Submitter ID P03LPV. Actions: Reject, Approve.

- Section: Recommendations.
- Section: Approval Details.

iPhone Alerts (Bottom Right):

- Header: Category, All Alerts (25), 9:41 AM, 100% battery.
- Profile: Jennifer Martin.
- Opportunity Size: \$15-20M.
- Segment: HNW.
- Lead Rating: 8.
- Status: New Lead.
- Description: Jennifer Martin, EVP Strategy of ABC Enterprises, holds shares estimated to be worth \$15-20M following IPO and has 6 client connections.
- Actions: Delegate, Postpone, Act.
- Section: Recommendations.
- Items: Create Case Team to prepare proposals, Request introduction from mutual connection.
- Section: Approval Details.
- Items: Target Account Size, Net Worth, Age, Investment Objective, Capital Appre.

iPad 9:41 AM 100% FW1-6 2015 Dashboard Women's Shoes

Revenue (YTD) Margin (YTD) Days on Hand

70.1 mil 68.3 mil 69.1 mil

Last Year Plan Actual

Top Performers

- VT Living Blue Long Sleeves VT LIVING SELL
- VT Living Gray Long Sleeves VT LIVING SELL
- Edge Dark Blue Shirts EDGE SELL
- Edge Gray Plaid Shirts EDGE SELL
- Illusions Green Long Sleeves ILLUSIONS SELL

Oxford Blue Shirt Forecast - Men's Shirts | Fall 2015

Projected Revenue & Margin Open-to-Buy Order Total

\$79.5m 48% \$15.65m 448,200 UNITS 31% OTB 27% UNITS \$2,099,500 50,000 UNITS

Similar Style Oxford Blue Shirt

| | |
|--------------------------------|---|
| Static Gray Style# 7887 Cotton | Style# 7896 Polyester Blend |
| Sell Through: 80% | Attributes: Formal, Polyester, Business, Blue, Classic, Promotional |
| Margin: 47% | |

VT Living

T: 408-555-0941
E: vtliving@geoport.com
A: 774 Loma Vista Ave
Los Gatos, CA 95032

Forecast Model

Plan 2015 Actual 2014

Cost \$41.99 Planned Colors 3

Suggested Retail Price \$79.99 Quantity

Initial Retail Price \$0

Markup 16%

Add to Cart

Buy Analyze

iPad 9:41 AM 100%

FW1-6 2015 Dashboard Women's Shoes

Revenue (YTD)

Margin (YTD)

Days on Hand

Top Performers See All >

| | VT Living Blue Long Sleeves | 29.3% SELL THROUGH |
|--------------|------------------------------|--------------------|
| SELL THROUGH | VT LIVING | 29.3% |
| SELL THROUGH | VT Living Gray Long Sleeves | 21.8% |
| SELL THROUGH | Edge Dark Blue Shirts | 20.9% |
| SELL THROUGH | Edge Gray Plaid Shirts | 18.7% |
| SELL THROUGH | Illusions Green Long Sleeves | 16.5% |

Bottom Performers See All >

| | Edge Brown Plaid Shirts | -3.8% SELL THROUGH |
|--------------|--------------------------------|--------------------|
| SELL THROUGH | EDGE | -3.8% |
| SELL THROUGH | Illusions Striped Long Sleeves | -2.5% |
| SELL THROUGH | VT Living Lavender Shirts | -1.2% |
| SELL THROUGH | EDGE Creme Plaid Shirts | 0.3% |
| SELL THROUGH | EDGE Pinstripes Shirts | 0.4% |

Trending

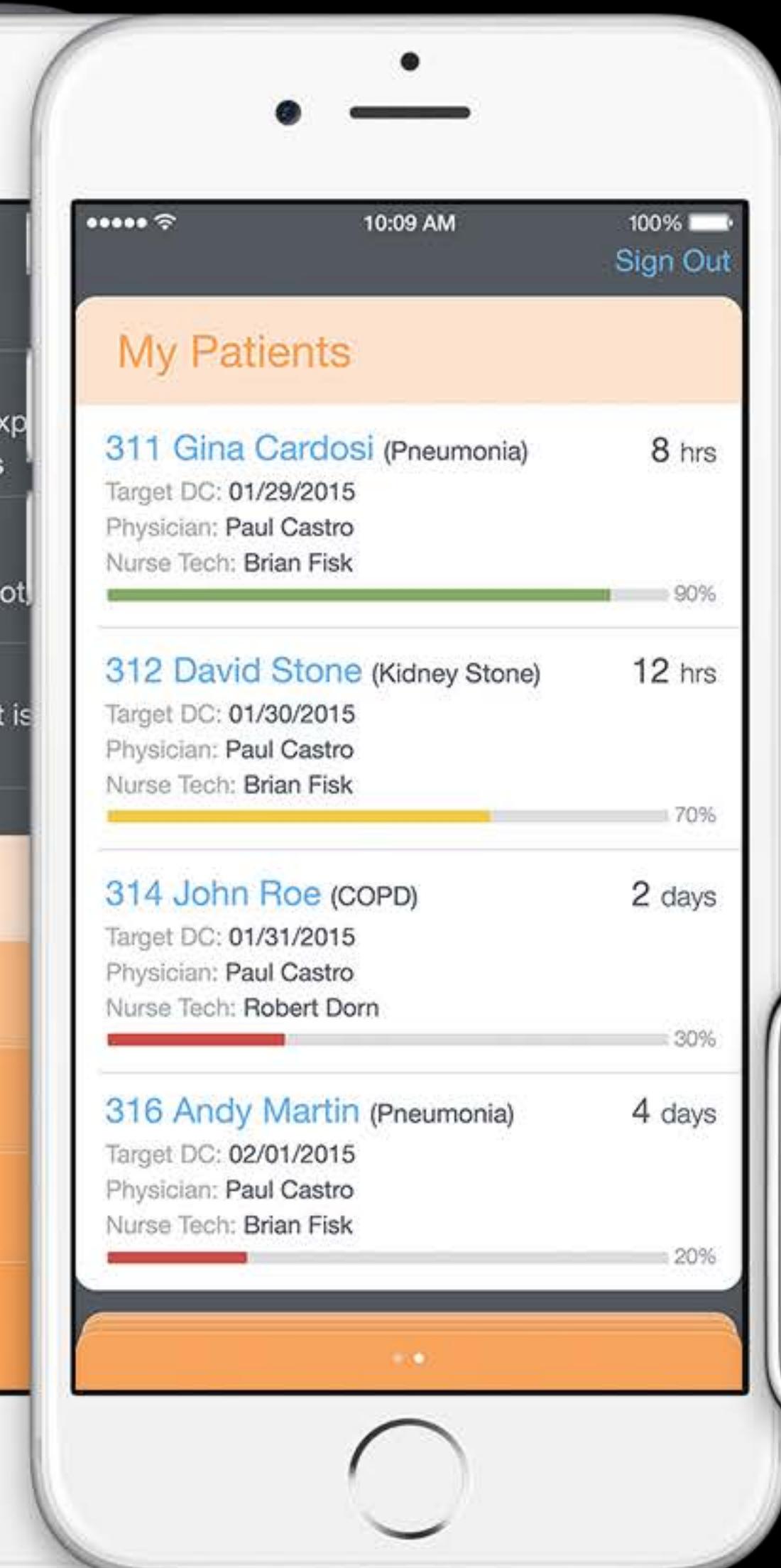
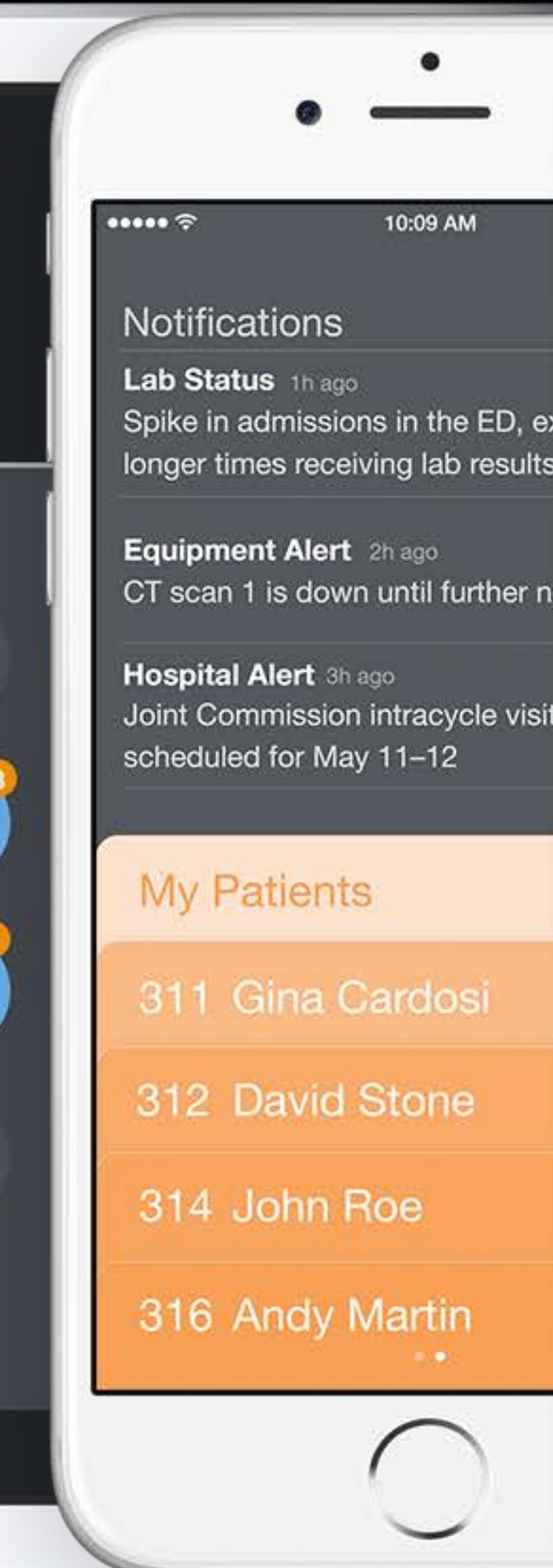
- Edge Brown Plaid Shirts have increased inventory by over 20% last week.
- Midwest buyers have been purchasing VT Living Blue Long Sleeves
- VT Living products have an overall inventory sales increase of 15%.
- Company performance is up 10% this Spring season.

Order Total \$2,099,500 50,000 UNITS

VT Living T: 408-555-0941 E: vtliving@geoport.com A: 774 Loma Vista Ave Los Gatos, CA 95032

Add to Cart

Buy Analyze





Enterprise and iOS



Enterprise and iOS

Device deployment



One-to-One

One-to-One



One-to-One



One-to-One



One-to-One



One-to-One

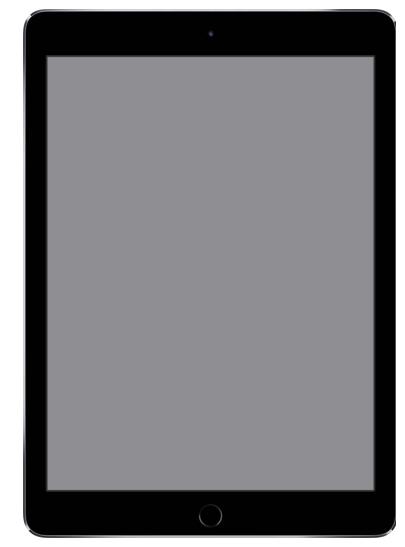
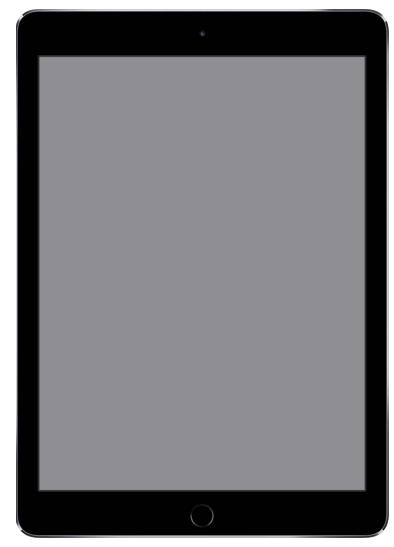
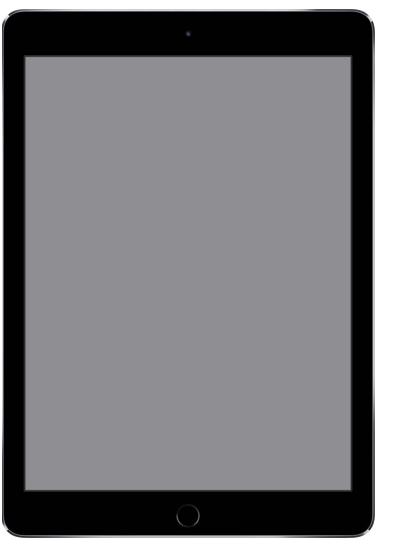


One-to-One



Shared-Use

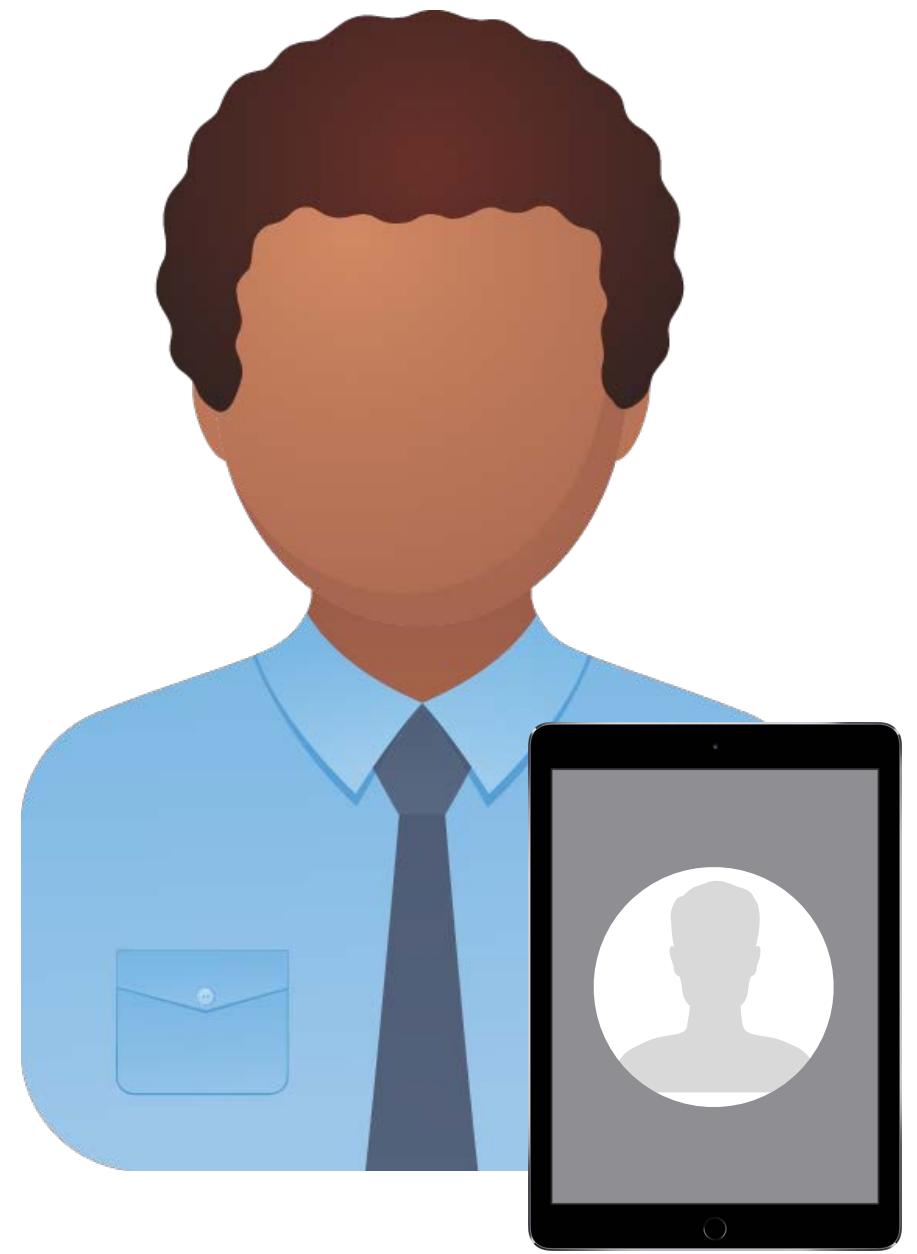
Shared-Use



Shared-Use



Shared-Use



Shared-Use



Shared-Use



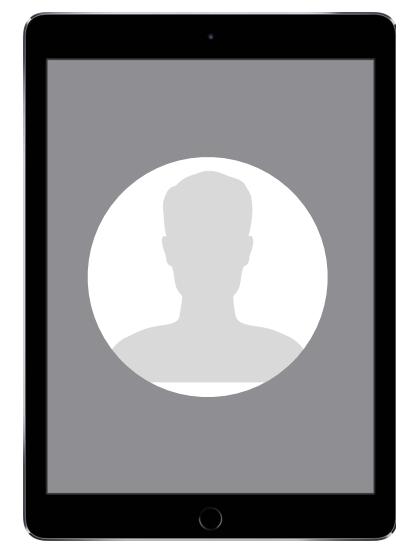
Shared-Use



Shared-Use



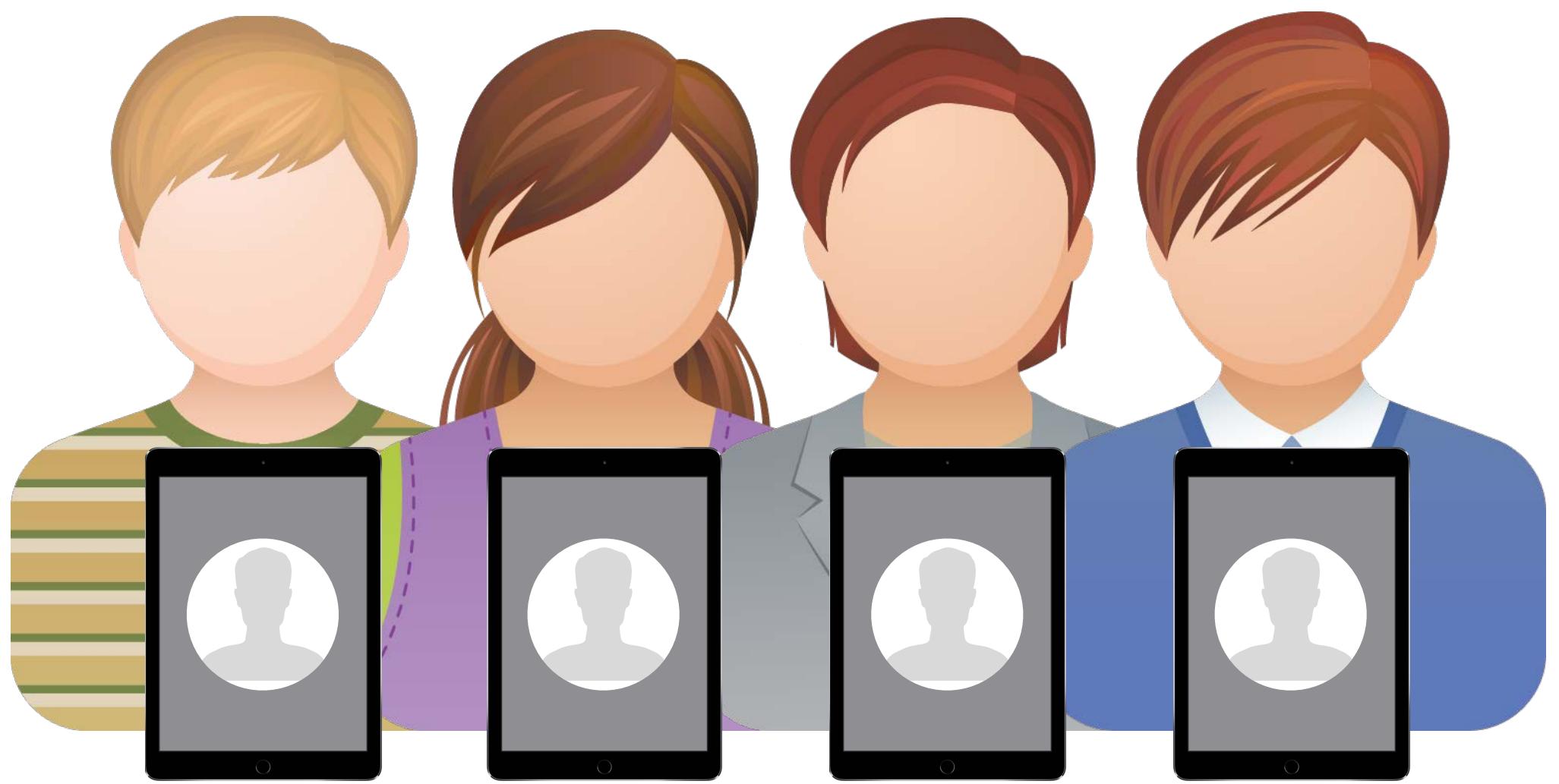
Shared-Use



Shared-Use



Shared-Use



Shared-Use



One-to-One



Shared-Use



One-to-One



Shared-Use



Shared-Use



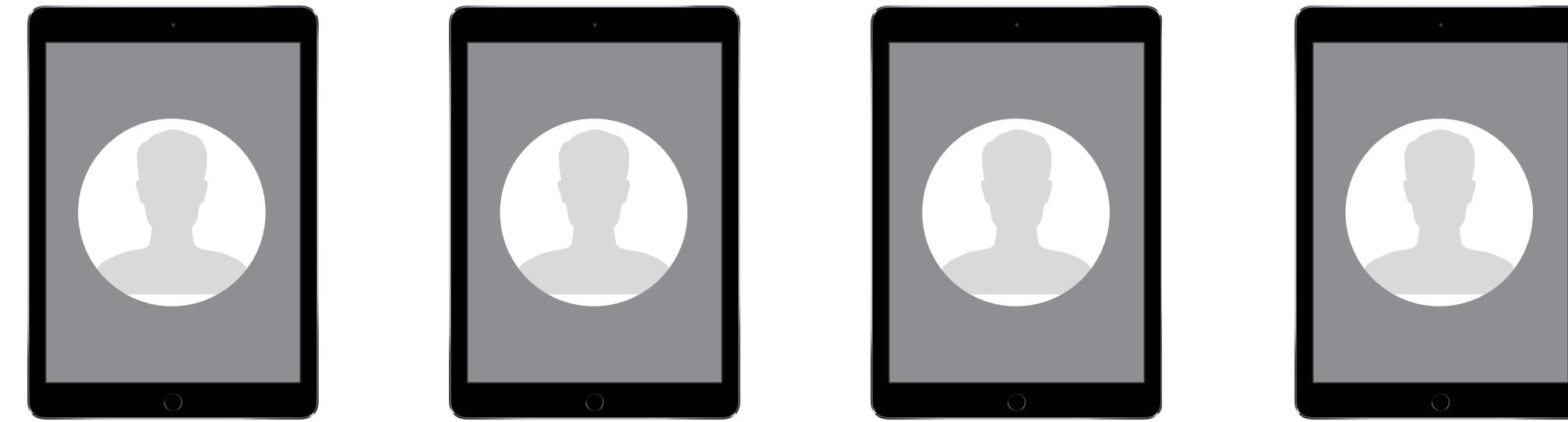
Shared-Use



Shared-Use



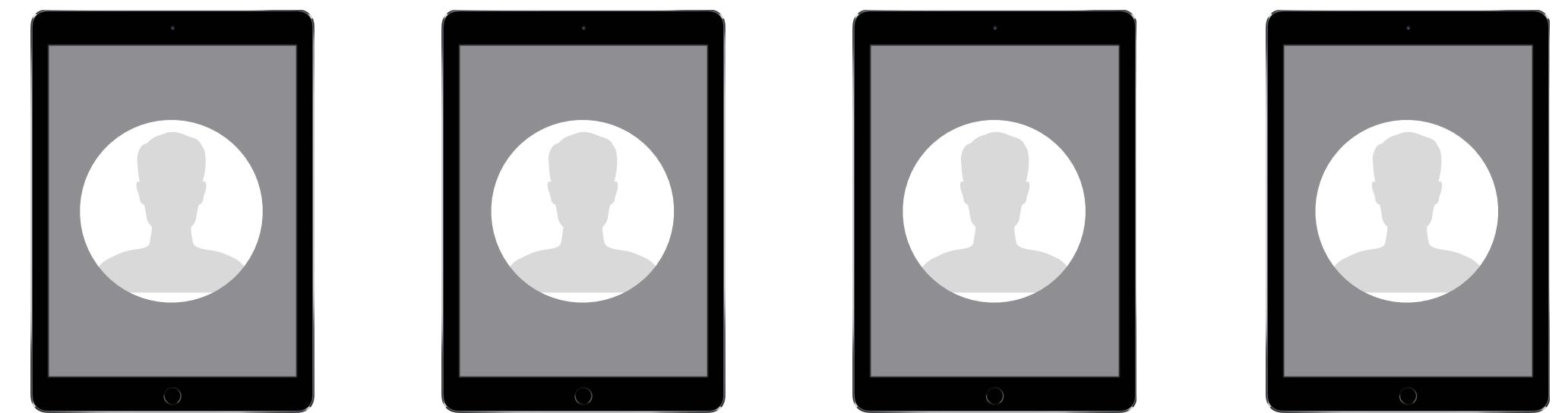
Shared-Use



Shared-Use



Shared-Use



Shared-Use



Device Management

One-to-One

Shared-Use

Device Management

One-to-One



Shared-Use

Device Enrollment Program

Volume Purchase Program

Device Management

One-to-One



Device Enrollment Program

Volume Purchase Program

Shared-Use



Apple Configurator





Apple Configurator







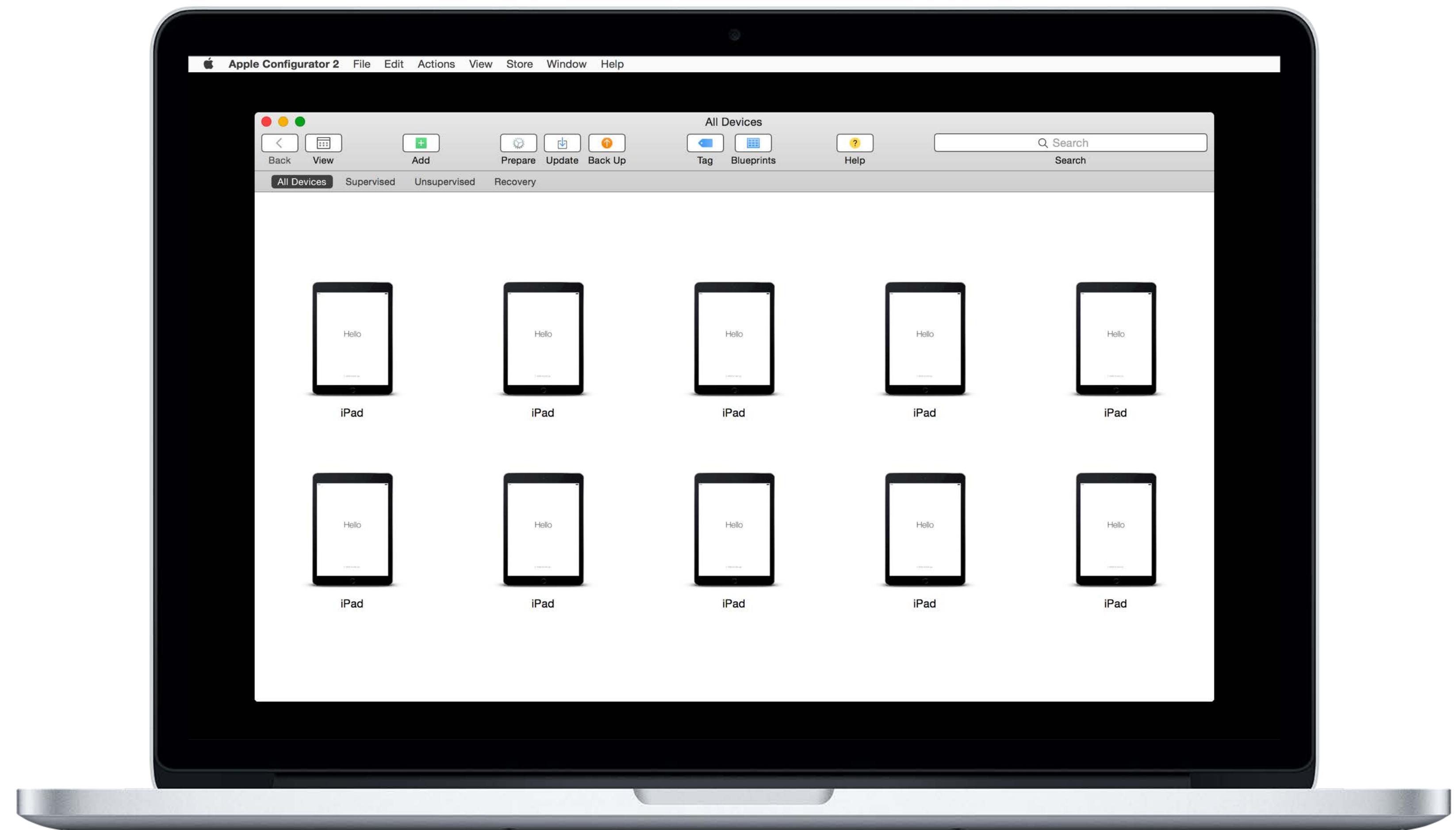


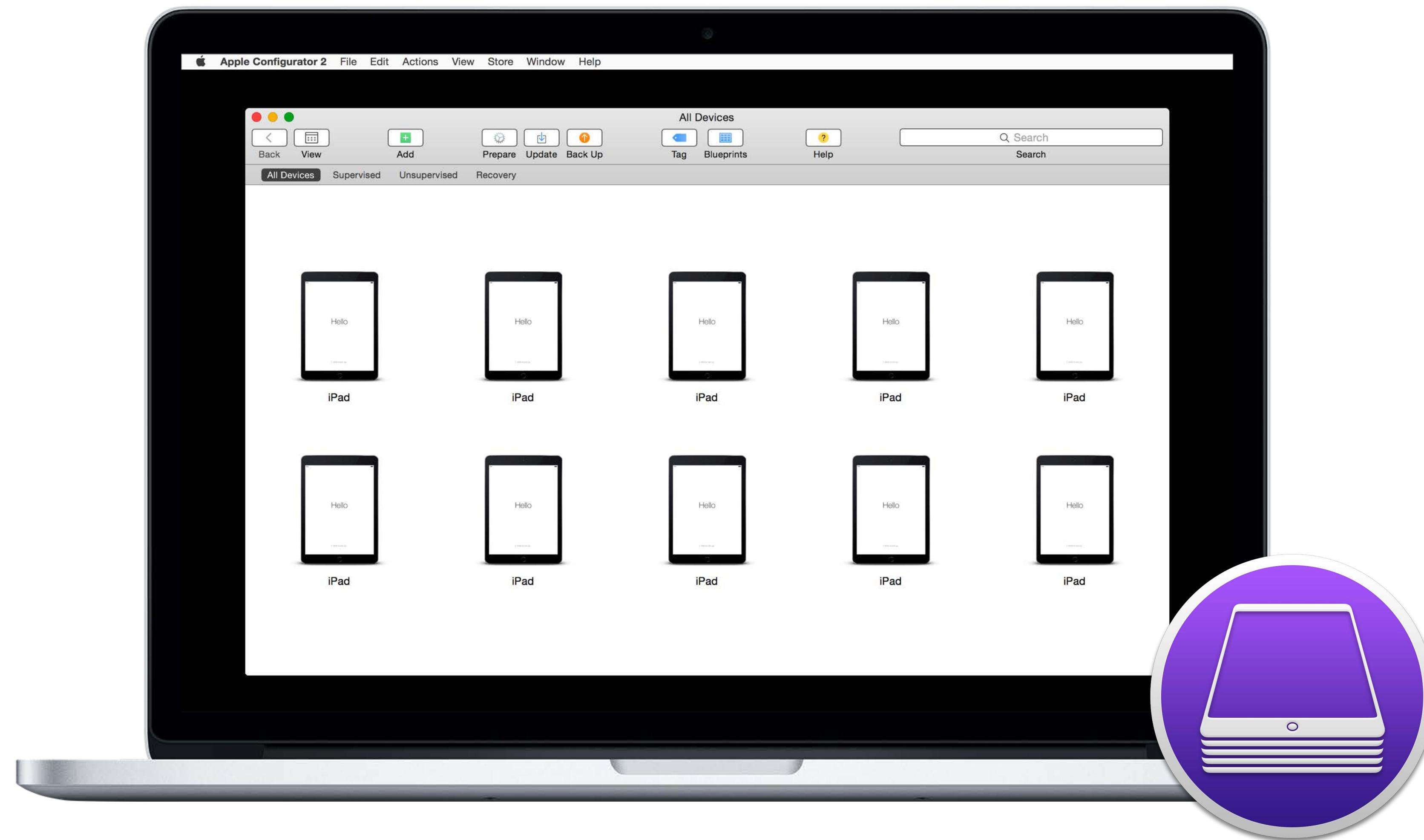


Apple Configurator



Apple Configurator 2





All Devices

Back View Add Prepare Update Back Up Tag Blueprints Help Search

All Devices Supervised Unsupervised Recovery

Hello

iPad iPad



All Devices

Back View Add Prepare Update Back Up Tag Blueprints Help Search Search

All Devices Supervised Unsupervised Recovery

iPad iPad iPad iPad iPad

iPad iPad iPad iPad iPad

iPad

iPad

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iPad

All Devices

Back View Add Prepare Update Back Up Tag Blueprints Help Search

All Devices Supervised Unsupervised Recovery

iPad iPad iPad iPad iPad

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iPad

All Devices

Back View Add Prepare Update Back Up Tag Blueprints Help Search

All Devices Supervised Unsupervised Recovery

Search

iPad iPad iPad iPad iPad

iPad iPad iPad iPad iPad

iPad

iPad

Back View Add Prepare Update Back Up Tag Blueprints Help Search Search

All Devices Supervised Unsupervised Recovery

| Name | Device Class | Capacity | Serial Number | Product Version | Is Supervised | Slot | Update |
|------|--------------|----------|---------------|-----------------|---------------|------|--------|
| iPad | iPad | 63.42 GB | DLXNK6FUG5VW | 8.3 | | | 0 |
| iPad | iPad | 63.42 GB | DLXNK62KG5VW | 8.3 | | | 0 |
| iPad | iPad | 63.42 GB | DLXNK6DMG5VW | 8.3 | | | 0 |
| iPad | iPad | 63.42 GB | DLXNK5V3G5VW | 8.3 | | | 0 |
| iPad | iPad | 63.42 GB | DLXNK5Z1G5VW | 8.3 | | | 0 |
| iPad | iPad | 63.42 GB | DLXNK0F4G5VW | 8.3 | | | 0 |
| iPad | iPad | 63.42 GB | DLXNJGGMG5VW | 8.3 | | | 0 |
| iPad | iPad | 63.42 GB | DLXNK6EVG5VW | 8.3 | | | 0 |
| iPad | iPad | 63.42 GB | DLXNJGLPG5VW | 8.3 | | | 0 |
| iPad | iPad | 63.42 GB | DLXNJGK9G5VW | 8.3 | | | 0 |



iPad

Back View Add Prepare Update Back Up Tag Blueprints Help Search Search

All Devices Supervised Unsupervised Recovery

| Name | Device Class | Capacity | Serial Number | Product Version | Is Supervised | Slot | Update |
|------|--------------|----------|---------------|-----------------|---------------|------|--------|
| iPad | iPad | 63.42 GB | DLXNK6FUG5VW | 8.3 | | | 0 |
| iPad | iPad | 63.42 GB | DLXNK62KG5VW | 8.3 | | | 0 |
| iPad | iPad | 63.42 GB | DLXNK6DMG5VW | 8.3 | | | 0 |
| iPad | iPad | 63.42 GB | DLXNK5V3G5VW | 8.3 | | | 0 |
| iPad | iPad | 63.42 GB | DLXNK5Z1G5VW | 8.3 | | | 0 |
| iPad | iPad | 63.42 GB | DLXNK0F4G5VW | 8.3 | | | 0 |
| iPad | iPad | 63.42 GB | DLXNJGGMG5VW | 8.3 | | | 0 |
| iPad | iPad | 63.42 GB | DLXNK6EVG5VW | 8.3 | | | 0 |
| iPad | iPad | 63.42 GB | DLXNJGLPG5VW | 8.3 | | | 0 |
| iPad | iPad | 63.42 GB | DLXNJGK9G5VW | 8.3 | | | 0 |



All Devices

Back View Add Prepare Update Back Up Tag Blueprints Help Search Search

iPad

About

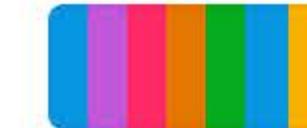
| | |
|----------|--|
| Model | iPad Air 2 |
| Capacity | 55.86 GB |
| State | Booted |
| Battery | 100%  |

Tech Info

| | |
|-------------------|--|
| iOS Version | 8.3 (12F69) |
| Serial Number | DLXNK6FUG5VW |
| UDID | 782D8D7D8C01B4AD9...F9F457479A384B4868 |
| ECID | 0xB498C20090826 |
| Wi-Fi Address | 78:7E:61:CA:13:90 |
| Bluetooth Address | 78:7E:61:CA:13:AE |
| Latest Backup | Never |

Encrypt local backup
Backs up account passwords.
[Change Password...](#)

Usage

 55.51 GB Available



All Devices

Back View Add Prepare Update Back Up Tag Blueprints Help Search Search

iPad

About

| | |
|----------|--|
| Model | iPad Air 2 |
| Capacity | 55.86 GB |
| State | Booted |
| Battery | 100%  |

Tech Info

| | |
|-------------------|--|
| iOS Version | 8.3 (12F69) |
| Serial Number | DLXNK6FUG5VW |
| UDID | 782D8D7D8C01B4AD9...F9F457479A384B4868 |
| ECID | 0xB498C20090826 |
| Wi-Fi Address | 78:7E:61:CA:13:90 |
| Bluetooth Address | 78:7E:61:CA:13:AE |
| Latest Backup | Never |

Encrypt local backup
Backs up account passwords.
[Change Password...](#)

Usage

 55.51 GB Available



All Devices

Back View Add Prepare Update Back Up Tag Blueprints Help Search Search

Info

Apps Profiles Console

Prepare iOS devices

Apple Configurator can prepare your devices by supervising them, enrolling them in an MDM server, or configuring which panes will be skipped in the setup assistant before reaching the home screen.

Configuration: Manual

?

Cancel Previous Next

Encrypt local backup
Backs up account passwords.
Change Password...

Usage

55.51 GB Available

F9F457479A384B4868

Never



All Devices

Back View Add Prepare Update Back Up Tag Blueprints Help Search Search

Enroll in MDM Server

An MDM server allows you to manage enrolled devices remotely over the air. If you have an MDM server, enter its enrollment URL below. Once the device has been prepared, it will be enrolled with your MDM server and further management of the device can be done using the MDM server console.

Server: Do not enroll in MDM

Cancel Previous Next

Encrypt local backup
Backs up account passwords.
Change Password...

F9F457479A384B4868

Usage

55.51 GB Available



All Devices

Back View Add Prepare Update Back Up Tag Blueprints Help Search Search

Supervise devices

An iOS device can be supervised, allowing for more advanced configuration for devices owned by an institution. Additional restrictions and settings are available, such as installing configuration profiles without needing to tap on the device's screen.

Supervise devices
 Allow devices to connect to other computers

?

Cancel Previous Next

9F457479A384B4868

Encrypt local backup
Backs up account passwords.
Change Password...

Usage

55.51 GB Available

?



All Devices

Back View Add Prepare Update Back Up Tag Blueprints Help Search Search

Assign to Organization

The name, address, and phone number you provide for an organization appears in Settings > General > About on a supervised device. This information is mandatory for supervised devices and cannot be changed once the device has been prepared.

Organization: Woodbury Middle School

?

Cancel Previous Next

Encrypt local backup
Backs up account passwords.
Change Password...

Usage

55.51 GB Available

F9F457479A384B4868

Never



All Devices

Back View Add Prepare Update Back Up Tag Blueprints Help Search Search

Configure iOS setup assistant

You can choose which steps you'd like the user to complete, easing the setup process for the user and making some choices you would prefer they not make.

Setup Assistant: **Don't show any steps**

Language Zoom
 Region Siri
 Location Services Diagnostics
 Set Up Passcode
 Move from Android Touch ID
 Apple ID Apple Pay

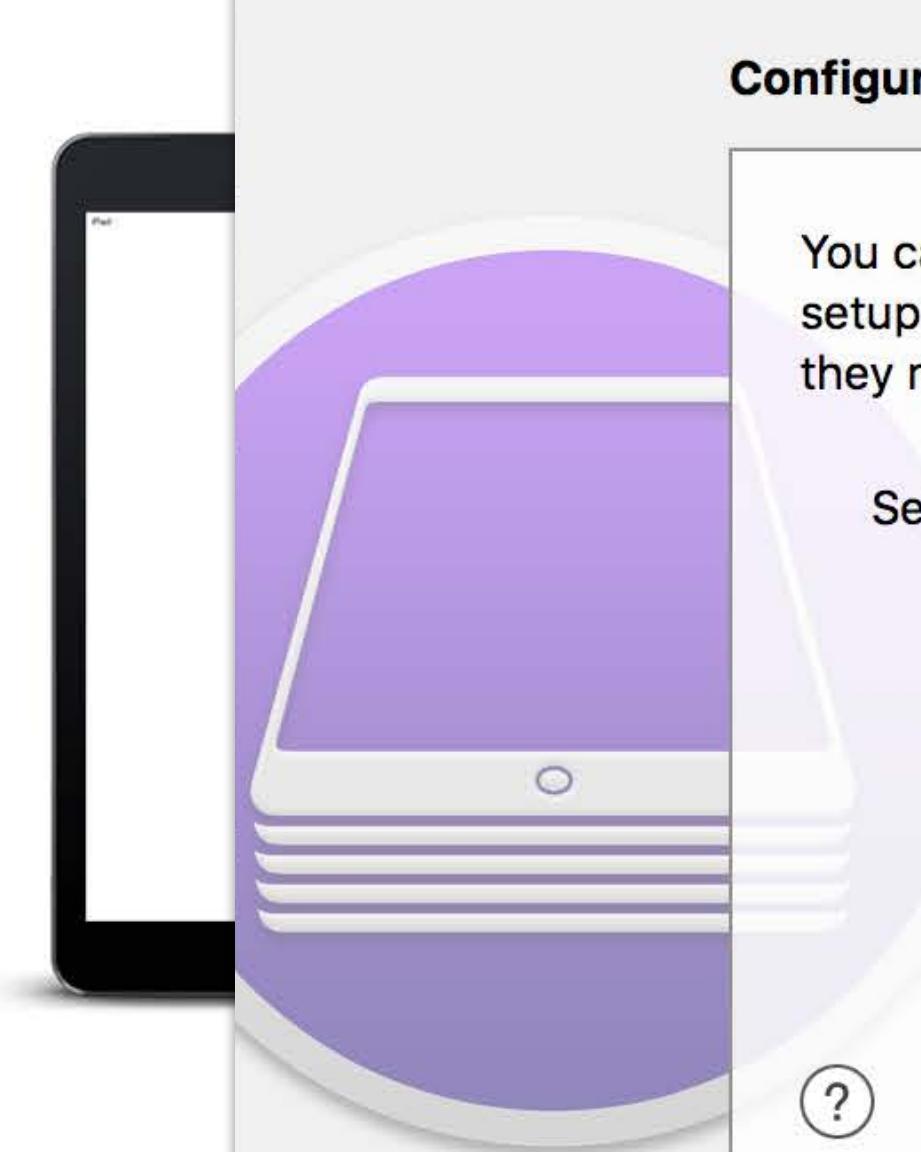
Cancel Previous **Prepare**

Encrypt local backup
Backs up account passwords.
Change Password...

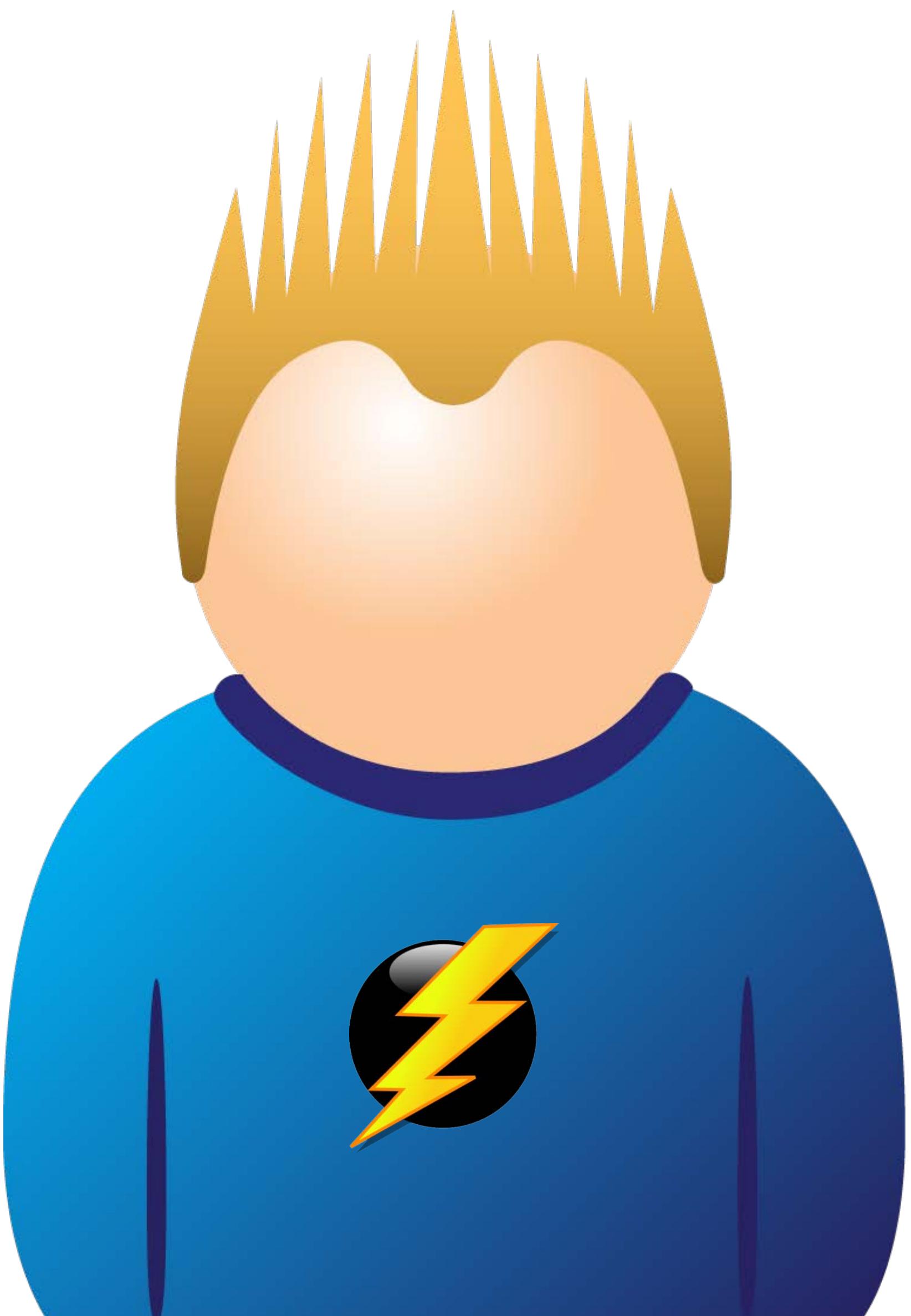
Usage

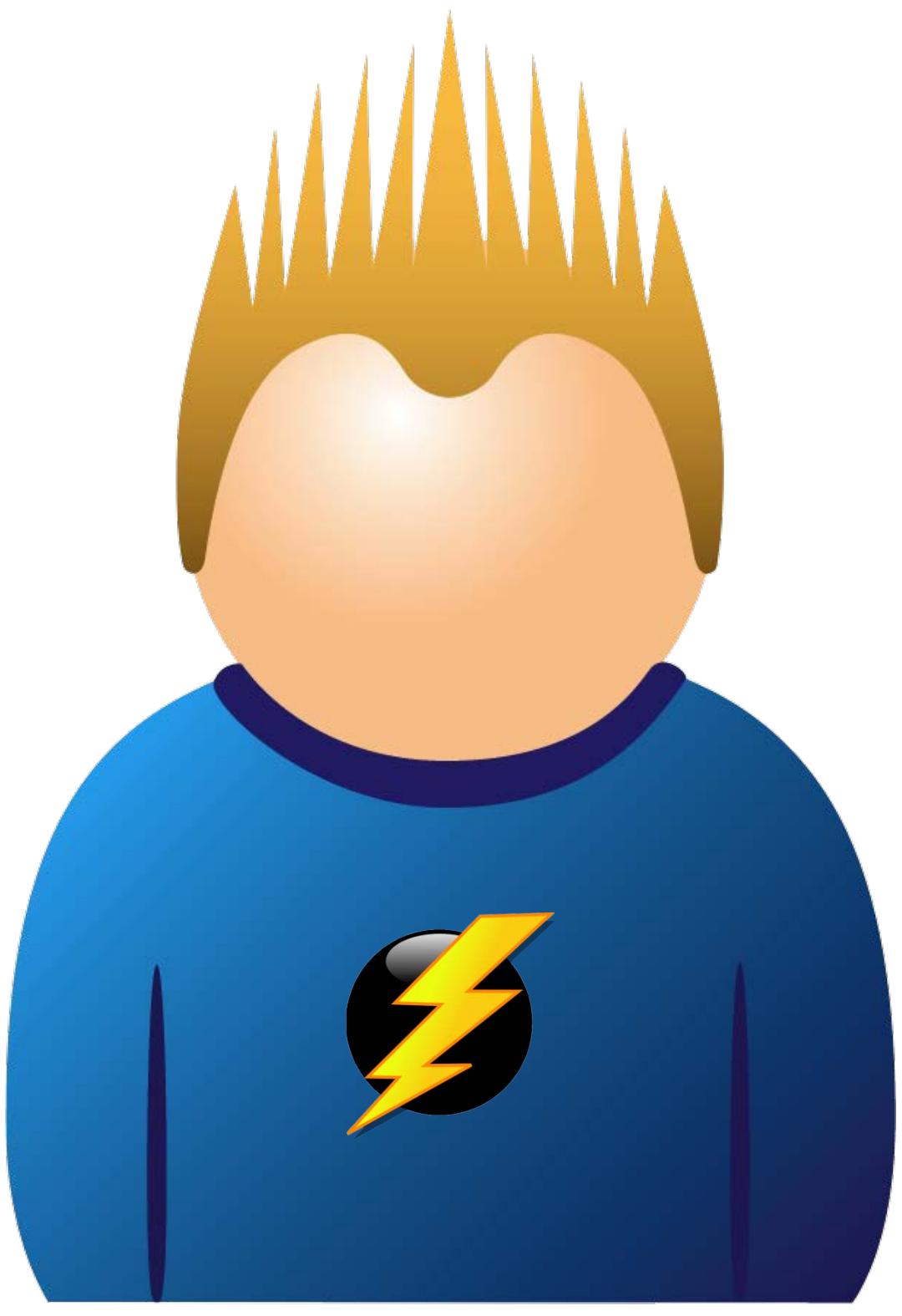
55.51 GB Available

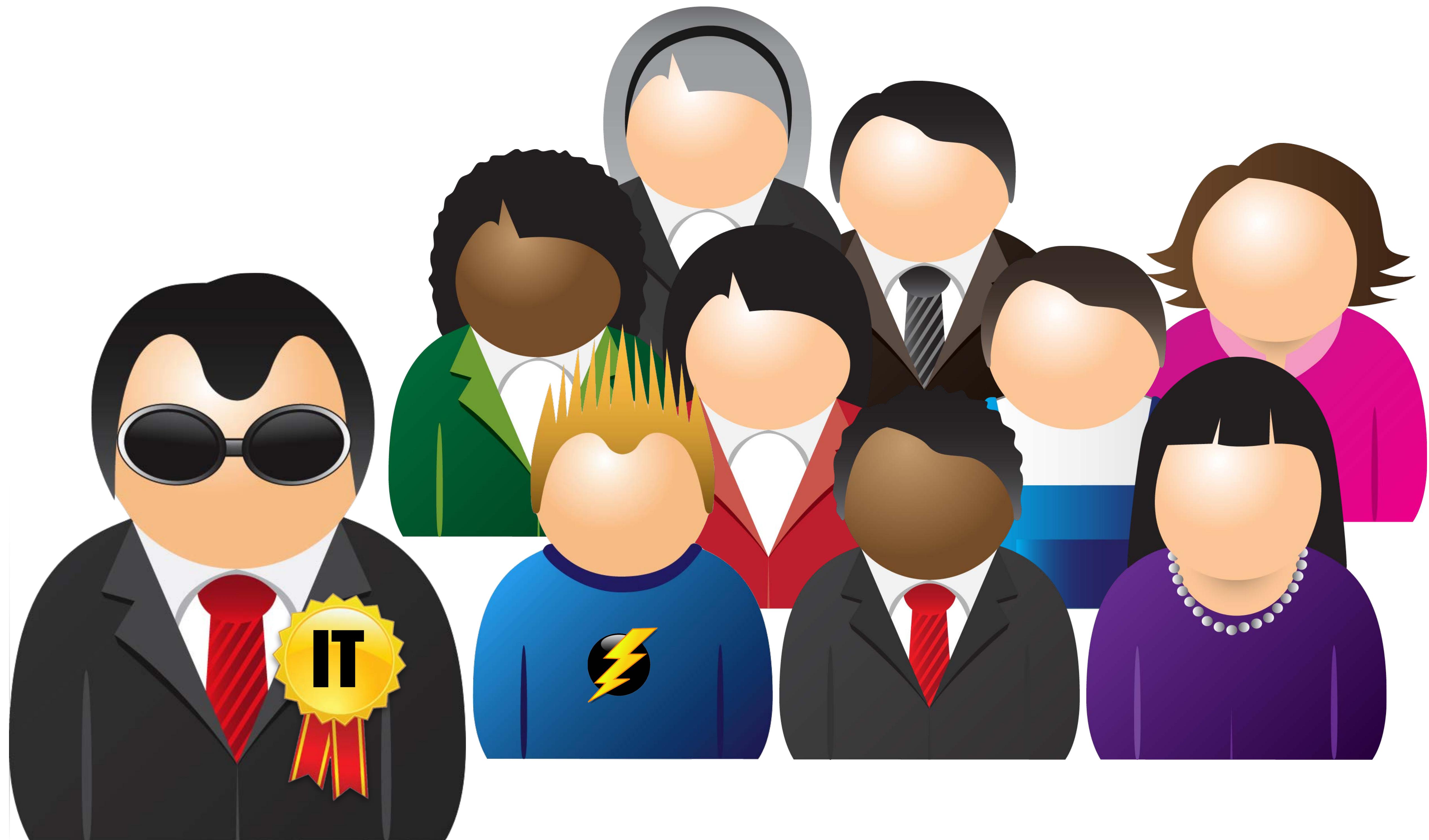
F9F457479A384B4868











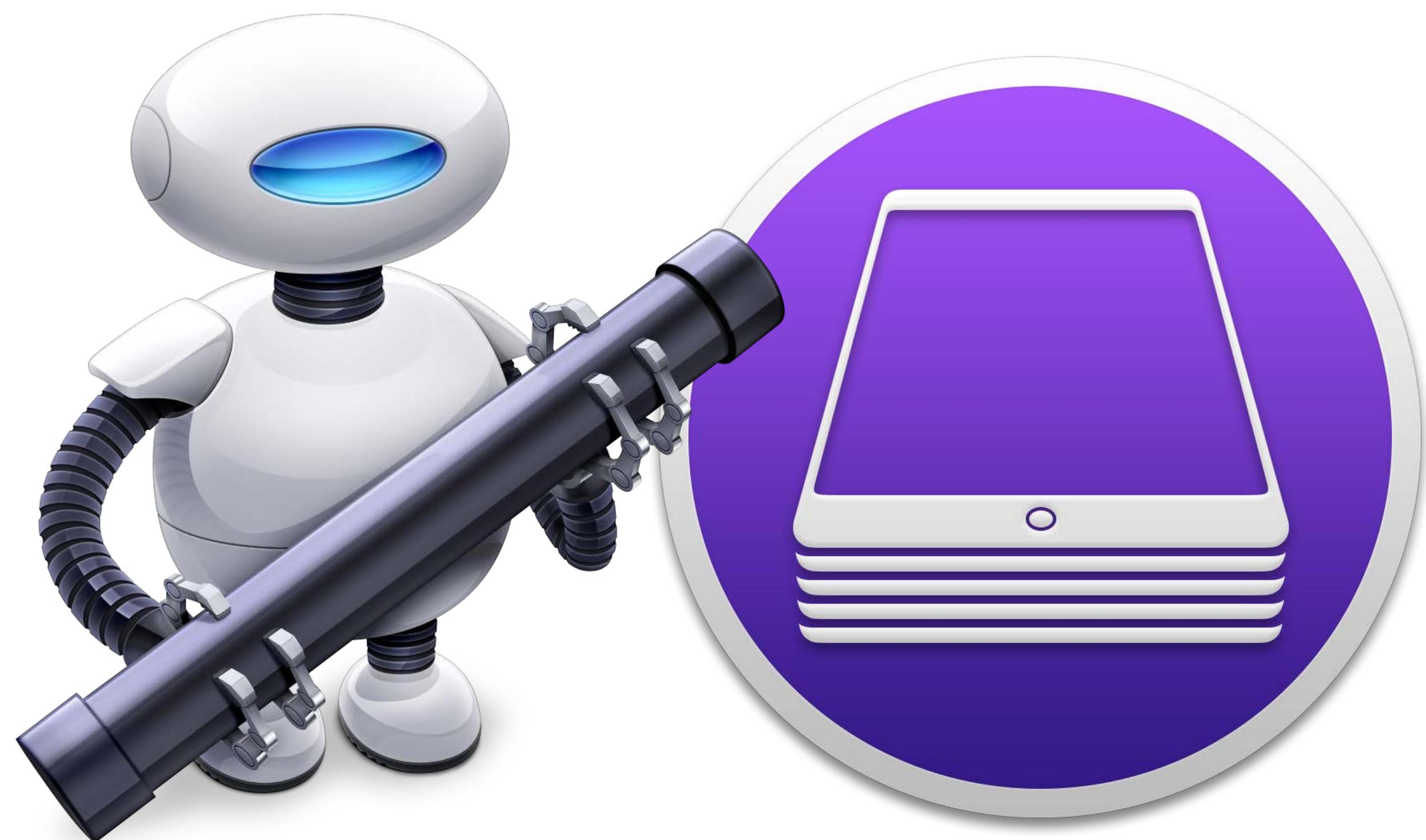


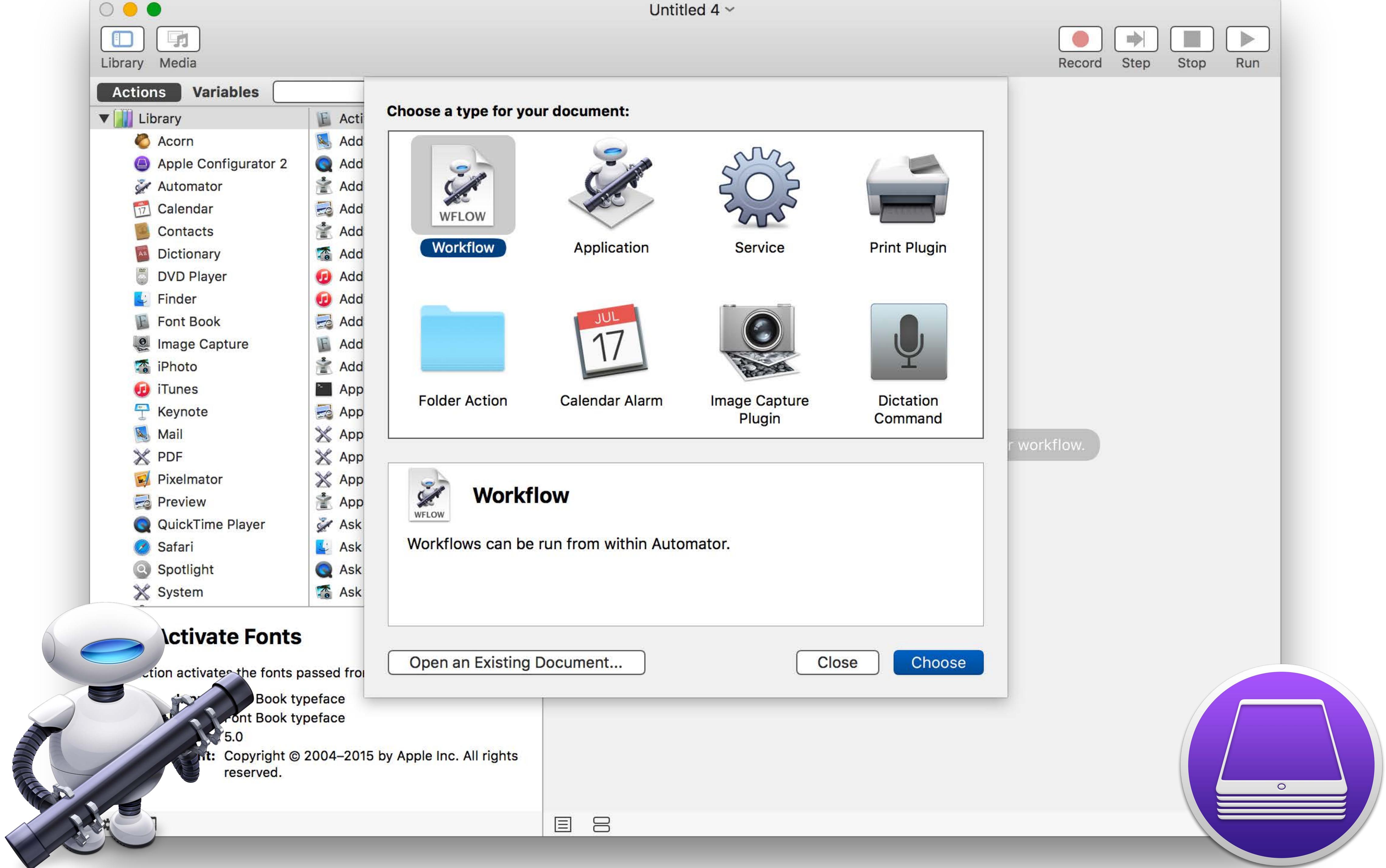
“Accidental Administrators”

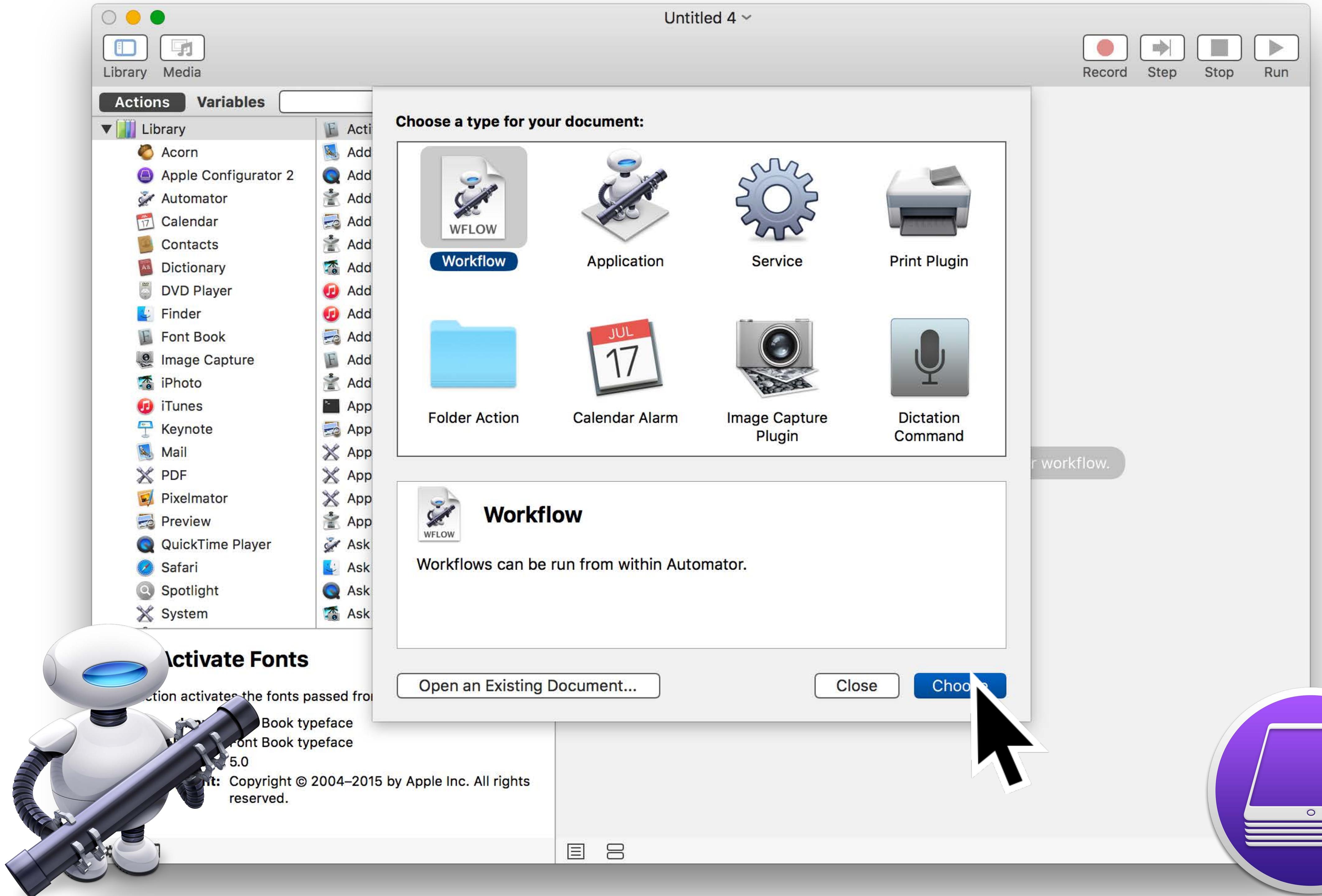


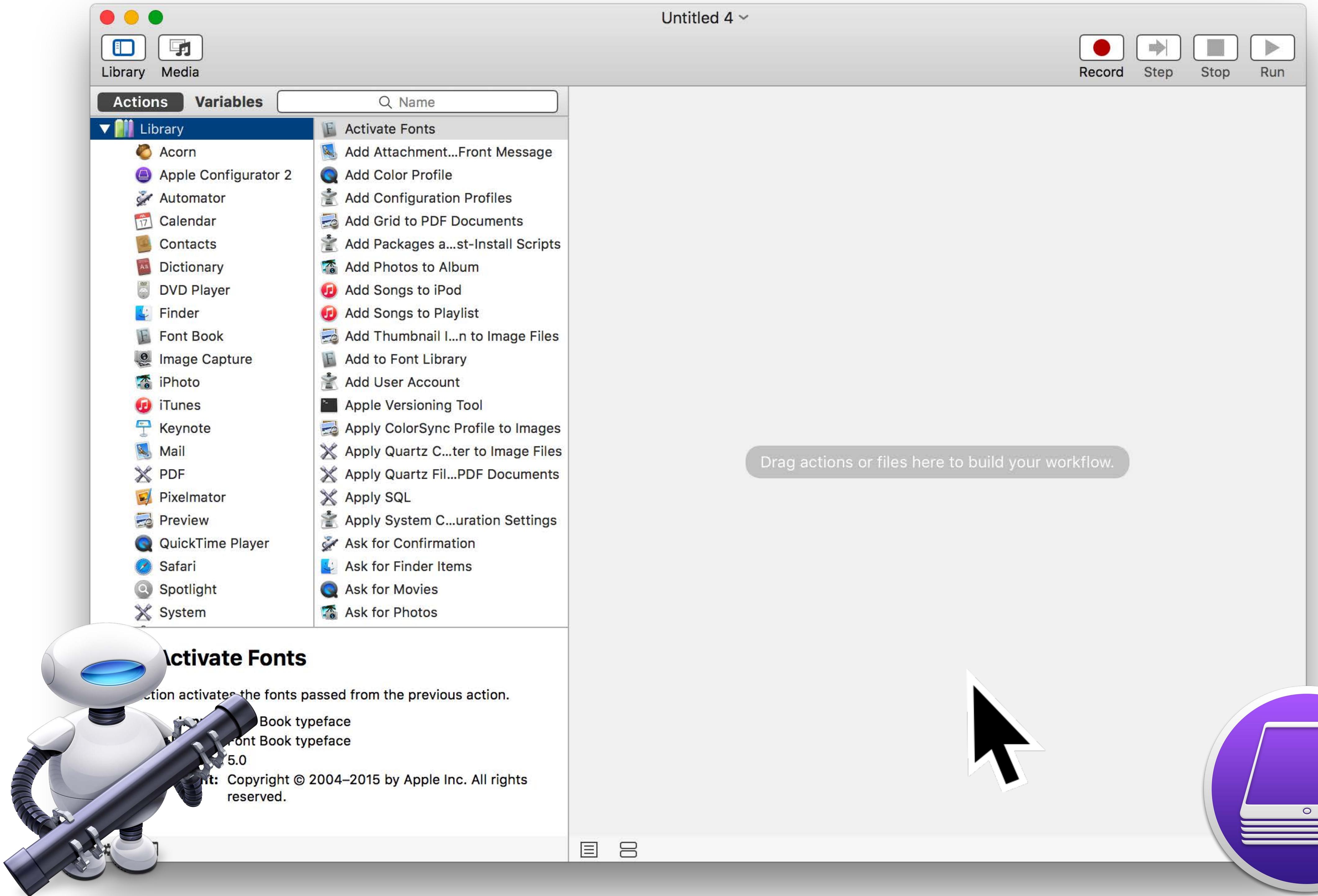


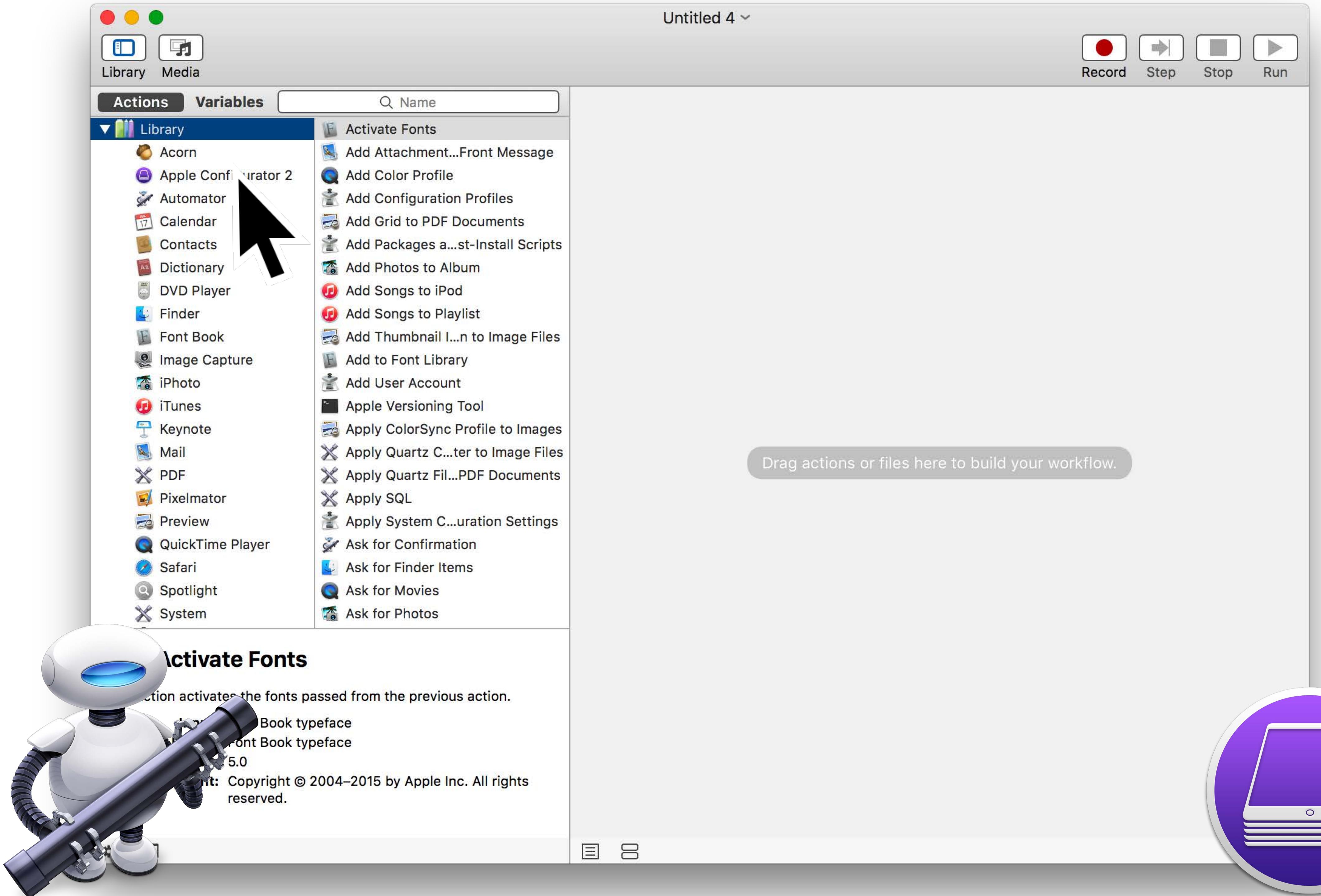












Untitled 4

Record Step Stop Run

Library Media

Actions Variables

Choose Connected Devices

Copy Documents to Devices

Erase Devices

Get Connected Devices

Install Apps on Devices

Install Profiles on Devices

Install Wallpaper on Devices

New Properties Table for Devices

Prepare Devices

Rename Devices

Restore Devices

Drag actions or files here to build your workflow.

Choose Connected Devices

This action returns a list of ECID identifiers to connected iOS devices chosen by the user from a displayed list.

This action takes no input

You can choose to include the device serial number in the data string displayed for each device.

Result: (Text) ECID Identifiers

Version: 1.0



Untitled 4

Record Step Stop Run

Library Media

Actions Variables

Choose Connected Devices

Copy Documents to Devices

Erase Devices

Get Connected Devices

Install Apps on Devices

Install Programs on Devices

Install Widgets on Devices

New Properties for Devices

Prepare Devices

Rename Devices

Restore Devices

Drag actions or files here to build your workflow.

Choose Connected Devices

This action returns a list of ECID identifiers to connected iOS devices chosen by the user from a displayed list.

This action takes no input.

You can choose to include the device serial number in the data string displayed for each device.

Result: (Text) ECID Identifiers

Version: 1.0



Untitled 4

Record Step Stop Run

Library Media

Actions Variables

Q Name

Library

- Acorn
- Apple Configurator 2
- Automator
- Calendar
- Contacts
- Dictionary
- DVD Player
- Finder
- Font Book
- Image Capture
- iPhoto
- iTunes
- Keynote
- Mail
- PDF
- Pixelmator
- Preview
- QuickTime Player
- Safari
- Spotlight
- System

Choose Connected Devices

Copy Documents to Devices

Erase Devices

Get Connected Devices

Install Apps on Devices

Install Programs on Devices

Install Widgets on Devices

New Properties for Devices

Prepare Devices

Rename Devices

Restore Devices

Drag actions or files here to build your workflow.

Get Connected Devices

This action returns a list of ECID identifiers to the iOS devices connected to this computer.

This action takes no input.

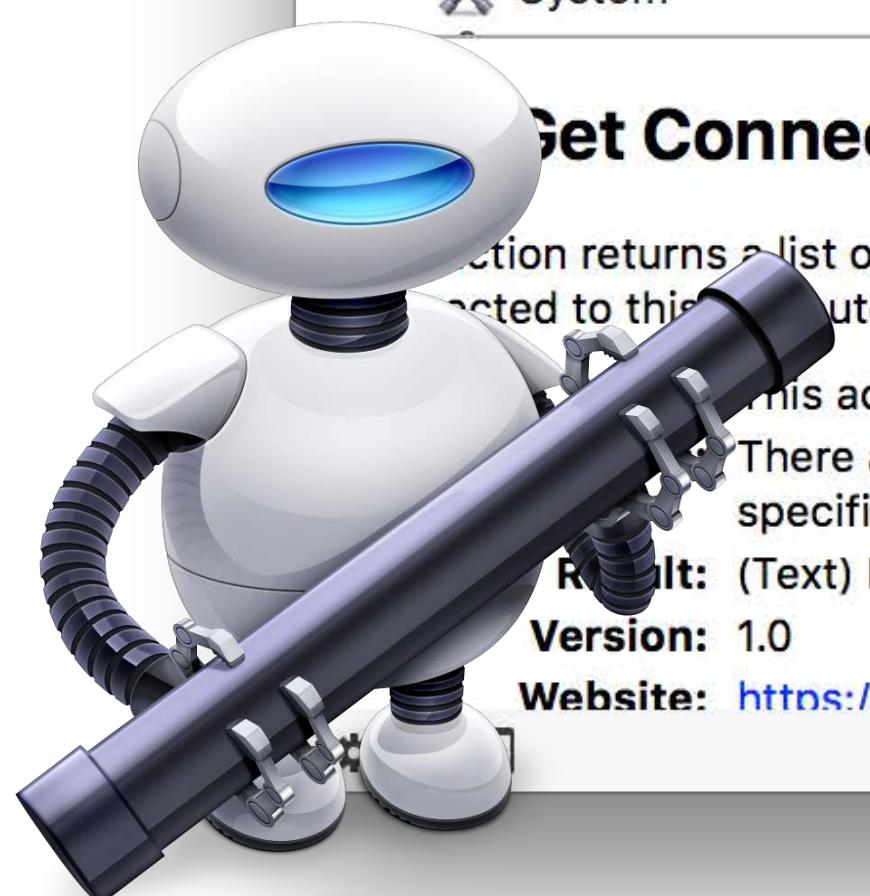
There are no specific tips for this action.

Result: (Text) ECID

Version: 1.0

Website: <https://macosxautomation.com/actions/get-connected-devices>

Get Connected Devices



The screenshot shows the Automator application window titled "Untitled 4 — Edited". The interface includes a toolbar with "Record", "Step", "Stop", and "Run" buttons. On the left, there's a sidebar with "Actions" and "Variables" tabs, and a search bar. The main pane displays a list of actions under the "Library" category. A context menu is open over the "Get Connected Devices" action, with a large black arrow pointing to it. The menu options include: Choose Connected Devices, Copy Documents to Devices, Erase Devices, Get Connected Devices (highlighted), Install App on Devices, Install Pro on Devices, Install Widget on Devices, New Properties for Devices, Prepare Devices, Rename Devices, and Restore Devices. Below the list, a sub-menu for "Get Connected Devices" is shown with "iPad" checked and "iPhone", "iPod touch", and "Apple TV" unchecked. At the bottom, there are "Results" and "Options" tabs. A callout bubble highlights the "Get Connected Devices" action with a large text box containing its details. A white robot icon is on the left, and a purple circular icon with a white device icon is on the right.

Untitled 4 — Edited

Record Step Stop Run

Actions Variables

Library Media

Choose Connected Devices

Copy Documents to Devices

Erase Devices

Get Connected Devices

Install App on Devices

Install Pro on Devices

Install Widget on Devices

New Properties for Devices

Prepare Devices

Rename Devices

Restore Devices

Select the type(s) of devices to identify:

iPad iPhone iPod touch Apple TV

Results Options

Get Connected Devices

This action returns a list of ECID identifiers to the iOS devices connected to this computer.

This action takes no input.

There are no specific tips for this action.

Result: (Text) ECID

Version: 1.0

Website: <https://macosxautomation.com/actions/get-connected-devices.html>

Get Connected Devices

The screenshot shows the Automator application window titled "Untitled 4 — Edited". The interface includes a toolbar with "Record", "Step", "Stop", and "Run" buttons. On the left, there's a sidebar with "Actions" and "Variables" tabs, and a search bar labeled "Name". Below the sidebar is a list of available actions under categories like "Library", "Automator", and "System". A large mouse cursor points to the "Get Connected Devices" action in the list. To the right of the list is a detailed view of the "Get Connected Devices" action, which is expanded. It shows a title "Get Connected Devices", a sub-instruction "Select the type(s) of devices to identify:", and a checkbox group where "iPad" is checked. Below this are "Results" and "Options" tabs.

Get Connected Devices

This action returns a list of ECID identifiers to the iOS devices connected to this computer.

This action takes no input.

There are no specific requirements for this action.

Result: (Text) ECID

Version: 1.0

Website: <https://macosxautomation.com/actions/get-connected-devices>

Get Connected Devices

Untitled 4 — Edited

Record Step Stop Run

Library Media

Actions Variables

Get Connected Devices

Select the type(s) of devices to identify:

iPad iPhone iPod touch Apple TV

Results Options

Library

- Acorn
- Apple Configurator 2
- Automator
- Calendar
- Contacts
- Dictionary
- DVD Player
- Finder
- Font Book
- Image Capture
- iPhoto
- iTunes
- Keynote
- Mail
- PDF
- Pixelmator
- Preview
- QuickTime Player
- Safari
- Spotlight
- System

Choose Connected Devices

Copy Documents to Devices

Erase Devices

Get Connected Devices

Install Apps on Devices

Install Profiles on Devices

Install Wallpaper on Devices

New Properties Table for Devices

Prepare Devices

Rename Devices

Restore Devices

Restore Devices

This action restores the devices whose identifiers are passed to this action as input.

(Text) ECID Identifiers

There are no options. None were used.

Result: (Text) ECID Identifiers

Version: 1.0

Restore Devices



Untitled 4 — Edited

Record Step Stop Run

Actions Variables

Library Media

Actions

Library

- Acorn
- Apple Configurator 2
- Automator
- Calendar
- Contacts
- Dictionary
- DVD Player
- Finder
- Font Book
- Image Capture
- iPhoto
- iTunes
- Keynote
- Mail
- PDF
- Pixelmator
- Preview
- QuickTime Player
- Safari
- Spotlight
- System

Choose Connected Devices

Copy Documents to Devices

Erase Devices

Get Connected Devices

Install Apps on Devices

Install Profiles on Devices

Install Wallpaper on Devices

New Properties Table for Devices

Prepare Devices

Rename Devices

Restore Devices

Get Connected Devices

Select the type(s) of devices to identify:

iPad iPhone iPod touch Apple TV

Results Options

Restore Devices

This action restores devices whose identifiers are passed as input to this action.

Results Options

Restore Devices

This action restores the devices whose identifiers are passed to this action as input.

(Text) ECID Identifiers

There are no options. None used.

Result: (Text) ECID Identifiers

Version: 1.0

Restore Devices



Untitled 4 — Edited

Record Step Stop Run

Actions Variables

Library Media

Actions Variables

Library

- Acorn
- Apple Configurator 2
- Automator
- Calendar
- Contacts
- Dictionary
- DVD Player
- Finder
- Font Book
- Image Capture
- iPhoto
- iTunes
- Keynote
- Mail
- PDF
- Pixelmator
- Preview
- QuickTime Player
- Safari
- Spotlight
- System

Choose Connected Devices

Copy Documents to Devices

Erase Devices

Get Connected Devices

Install Apps on Devices

Install Profiles on Devices

Install Wallpaper on Devices

New Properties Table for Devices

Prepare Devices

Rename Devices

Restore Devices

Get Connected Devices

Select the type(s) of devices to identify:

iPad iPhone iPod touch Apple TV

Results Options

Restore Devices

This action restores devices whose identifiers are passed as input to this action.

Results Options

Restore Devices

This action restores the devices whose identifiers are passed to this action as input.

(Text) ECID Identifiers

There are no options. None used.

Result: (Text) ECID Identifiers

Version: 1.0

Restore Devices



Untitled 4 — Edited

Record Step Stop Run

Actions Variables

Library Media

Choose Connected Devices
Copy Documents to Devices
Erase Devices
Get Connected Devices
Install Apps on Devices
Install Profiles on Devices
Install Wallpaper on Devices
New Properties Table for Devices
Prepare Devices
Rename Devices
Restore Devices

Get Connected Devices

Select the type(s) of devices to identify:
 iPad iPhone iPod touch Apple TV

Results Options

Restore Devices

This action restores devices whose identifiers are passed as input to this action.

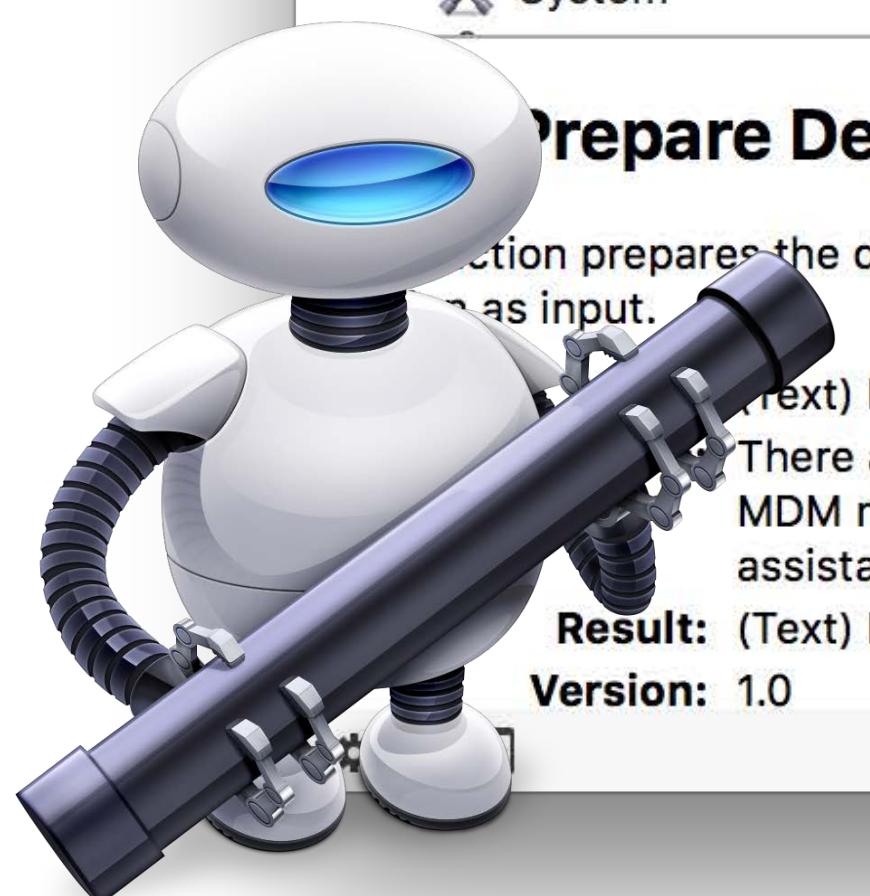
Results Options

Prepare Devices

This action prepares the devices whose identifiers are passed to this action as input.

(Text) ECID Identifiers
There are MDM managed devices.
Result: (Text) ECID Identifiers
Version: 1.0

Prepare Devices



Untitled 4 — Edited

Record Step Stop Run

Actions Variables

Library Media

Choose Connected Devices
Copy Documents to Devices
Erase Devices
Get Connected Devices
Install Apps on Devices
Install Profiles on Devices
Install Wallpaper on Devices
New Properties Table for Devices
Prepare Devices (selected)
Rename Devices
Restore Devices

Results Options

▼ **Restore Devices**

This action restores devices whose identifiers are passed as input to this action.

Results Options

▼ **Prepare Devices**

Enroll in MDM

URL:

Anchor certificate: (optional)

Supervise devices

Host certificate: (required)

Allow devices to connect to other computers

Organization information:

Name:

Dept:

Address:

eMail: Phone:

Configure iOS setup assistant:

Apple ID Location Display Zoom Siri
 Apple Pay Passcode Terms of Service

Prepare Devices

Robot icon: A white and blue robot holding a large purple telescope, looking at the screen.

Text area: (Text) ECID Identifiers
There are 1000 MDM managed devices.
Result: (Text) ECID Identifiers
Version: 1.0

Icon: A purple circle containing a white smartphone icon.

Untitled 4 — Edited

Record Step Stop Run

Actions Variables

Library Media

Choose Connected Devices
Copy Documents to Devices
Erase Devices
Get Connected Devices
Install Apps on Devices
Install Profiles on Devices
Install Wallpaper on Devices
New Properties Table for Devices
Prepare Devices
Rename Devices
Restore Devices

Library
Acorn
Apple Configurator 2
Automator
Calendar
Contacts
Dictionary
DVD Player
Finder
Font Book
Image Capture
iPhoto
iTunes
Keynote
Mail
PDF
Pixelmator
Preview
QuickTime Player
Safari
Spotlight
System

Results Options

Restore Devices

This action restores devices whose identifiers are passed as input to this action.

Results Options

Prepare Devices

Enroll in MDM

URL:

Anchor certificate: (optional)

Supervise devices

Host certificate: (required)

Allow devices to connect to other computers

Organization information:

Name: Woodbury Middle School

Dept:

Address: 123 Infinite Loop, Cupertino, CA 95014

eMail: admin@woodburymiddle.ca.edu Phone: 408-555-1234

Configure iOS setup assistant:

Apple ID Location Display Zoom Siri
 Apple Pay Passcode Terms of Service

Prepare Devices

Robot icon: A white and blue robot holding a large purple telescope.

Text area: Prepare Devices

Text area: Action prepares the devices whose identifiers are passed to this action as input.

Text area: Result: (Text) ECID Identifiers

Text area: There are MDM managed devices in the assistant.

Text area: Result: (Text) ECID Identifiers

Text area: Version: 1.0

Icon: Purple circular icon containing a white smartphone.

Untitled 4 — Edited

Record Step Stop Run

Actions Variables

Library Media

Actions Variables

Choose Connected Devices
Copy Documents to Devices
Erase Devices
Get Connected Devices
Install Apps on Devices
Install Profiles on Devices
Install Wallpaper on Devices
New Properties Table for Devices
Prepare Devices
Rename Devices
Restore Devices

Results Options

Restore Devices

This action restores devices whose identifiers are passed as input to this action.

Results Options

Prepare Devices

Enroll in MDM

URL:

Anchor certificate: (optional)

Supervise devices

Host certificate: (required)

Allow devices to connect to other computers

Organization information:

Name: Woodbury Middle School

Dept:

Address: 123 Infinite Loop, Cupertino, CA 95014

eMail: admin@woodburymiddle.ca.edu Phone: 408-555-1234

Configure iOS setup assistant:

Apple ID Location Display Zoom Siri
 Apple Pay Passcode Terms of Service

Rename Devices

Rename Devices

Action renames devices in numeric sequence, the devices whose identifiers are passed to this action as input.

(Text) ECID Identifiers

There are separators

Result: (Text) ECID Identifiers

Version: 1.0

Website: <https://macosxautomation.com>



Untitled 4 — Edited

Record Step Stop Run

Actions Variables

Library

- Acorn
- Apple Configurator 2
- Automator
- Calendar
- Contacts
- Dictionary
- DVD Player
- Finder
- Font Book
- Image Capture
- iPhoto
- iTunes
- Keynote
- Mail
- PDF
- Pixelmator
- Preview
- QuickTime Player
- Safari
- Spotlight
- System

Choose Connected Devices

Rename Devices

URL:

Anchor certificate: (optional)

Supervise devices

Host certificate: (required)

Allow devices to connect to other computers

Organization information:

Name:

Dept:

Address:

eMail: Phone:

Configure iOS setup assistant:

Apple ID Location Display Zoom Siri
 Apple Pay Passcode Terms of Service
 Diagnostics iCloud Backup Touch ID

Results Options

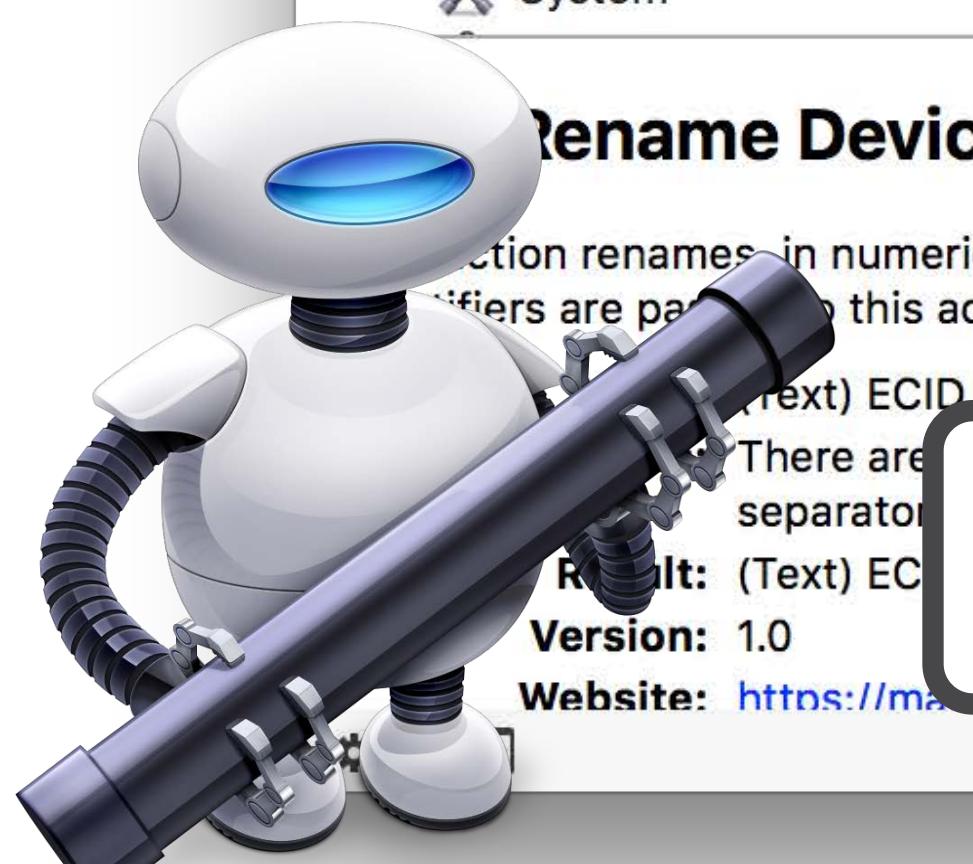
Rename Devices

Base name:

Starting number: Minimum digits:

Separator:

Rename Devices




Untitled 4 — Edited

Record Step Stop Run

Actions Variables

Library Media

Actions

Variables

Name

Choose Connected Devices
Copy Documents to Devices
Erase Devices
Get Connected Devices
Install Apps on Devices
Install Profiles on Devices
Install Wallpapers on Devices
New Property
Prepare Device
Rename Device
Restore Devices

URL:

Anchor certificate: (optional)

Supervise devices

Host certificate: (required)

Allow devices to connect to other computers

Organization information:

Name: Woodbury Middle School

Dept:

Address: 123 Infinite Loop, Cupertino, CA 95014

eMail: admin@woodburymiddle.ca.edu Phone: 408-555-1234

Configure iOS setup assistant:

Apple ID Location Display Zoom Siri
 Apple Pay Passcode Terms of Service
 Diagnostics iCloud Backup Touch ID

Results Options

Rename Devices

Action renames in numeric sequence, the devices whose identifiers are passed to this action as input.

(Text) ECID Identifiers

There are separators

Result: (Text) ECID Identifiers

Version: 1.0

Website: <https://macosxautomation.com>

Rename Devices

Base name: Woodbury Middle School

Starting number: 1 Minimum digits: 0000

Separator: space



Untitled 4 — Edited

Record Step Stop Run

Actions Variables

Library Media

Actions

Library

- Acorn
- Apple Configurator 2
- Automator
- Calendar
- Contacts
- Dictionary
- DVD Player
- Finder
- Font Book
- Image Capture
- iPhoto
- iTunes
- Keynote
- Mail
- PDF
- Pixelmator
- Preview
- QuickTime Player
- Safari
- Spotlight
- System

Choose Connected Devices

Copy Documents to Devices

Erase Devices

Get Connected Devices

Install Apps on Devices

Install Profiles on Devices

Install Wallpaper on Devices

New Property

Prepare Device

Rename Device

Restore Devices

URL:

Anchor certificate: (optional)

Supervise devices

Host certificate: (required)

Allow devices to connect to other computers

Organization information:

Name: Woodbury Middle School

Dept:

Address: 123 Infinite Loop, Cupertino, CA 95014

eMail: admin@woodburymiddle.ca.edu Phone: 408-555-1234

Configure iOS setup assistant:

Apple ID Location Display Zoom Siri

Apple Pay Passcode Terms of Service

Diagnostics iCloud Backup Touch ID

Results Options

Renew Devices

Base name: Woodbury Middle School

Starting number: 1 Minimum digits: 0000

Separator: space

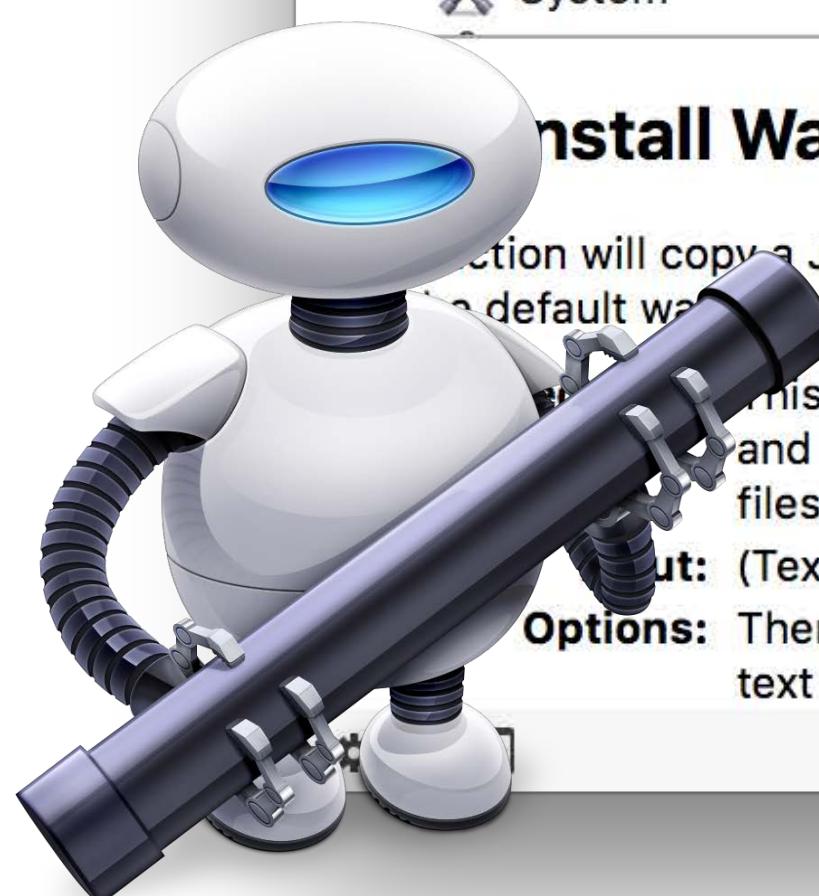
Install Wallpaper on Devices

This action will copy a JPEG file to the specified devices and set it to the default wallpaper using the indicated parameters.

This action works only with supervised devices and requires a host certificate file.

Output: (Text) EC

Options: There is a text to be



Basic iPad Setup and Prepare

Record Step Stop Run

Actions Variables

Library Media

Dept: _____

Address: 123 Infinite Loop, Cupertino, CA 95014

eMail: admin@woodburymiddle.ca.edu Phone: 408-555-1234

Configure iOS setup assistant:

Apple ID Location Display Zoom Siri
 Apple Pay Passcode Terms of Service
 Diagnostics iCloud Backup Touch ID

Results Options

Rename Devices

Base name: Woodbury Middle School

Starting number: 1 Minimum digits: 0000

Separator: space

Example: Woodbury Middle School 0001

Results Options

Install Wallpaper on Devices

Image file: Woodbury Vertical.jpg

Screen: Both

Text: _____ Use device name

Certificate: certificate.der

Install Wallpaper on Devices

Robot holding a large screwdriver.

This action will copy a JPEG file to the specified devices and set it to the default wallpaper using the indicated parameters.

This action works only with supervised devices and requires a certificate and required files.

Output: (Text) EC

Options: There is a text to be





Install Wallpaper on Devices

Library Media

Actions Variables

Library

- Acorn
- Apple Configurator 2
- Automator
- Calendar
- Contacts
- Dictionary
- DVD Player
- Finder
- Font Book
- Image Capture
- iPhoto
- iTunes
- Keynote
- Mail
- PDF
- Pixelmator
- Preview
- QuickTime Player
- Safari
- Spotlight
- System

Choose Connected Devices

Copy Documents to Devices

Erase Devices

Get Connected Devices

Install Apps on Devices

Install Profiles on Devices

Install Wallpaper on Devices

New Property for Devices

Prepare Device

Rename Device

Restore Devices

Basic iPad Setup and Prepare

Record Step Stop Run

Dept: []

Address: 123 Infinite Loop, Cupertino, CA 95014

eMail: admin@woodburymiddle.ca.edu Phone: 408-555-1234

Configure iOS setup assistant:

Apple ID Location Display Zoom Siri
 Apple Pay Passcode Terms of Service
 Diagnostics iCloud Backup Touch ID

Results Options

Rename Devices

Base name: Woodbury Middle School

Starting number: 1 Minimum digits: 0000

Separator: space

Example: Woodbury Middle School 0001

Results Options

Install Wallpaper on Devices

Image file: Woodbury Vertical.jpg

Screen: Both

Text:

Certificate: certificate.der

Use device name





Basic iPad Setup and Prepare

Get Connected Devices

Actions Variables

Library

- Acorn
- Apple Configurator 2
- Automator
- Calendar
- Contacts
- Dictionary
- DVD Player
- Finder
- Font Book
- Image Capture
- iPhoto
- iTunes
- Keynote
- Mail
- PDF
- Pixelmator
- Preview
- QuickTime Player
- Safari
- Spotlight
- System

Copy Documents to Devices

Erase Devices

Get Connected Devices

eMail: admin@woodburymiddle.ca.edu Phone: 408-555-1234

Configure iOS setup assistant:

Restore Devices

Prepare Dev

Rename Dev

Restore Devices

Results Options

Prepare Devices

Rename Devices

Example: Woodbury Middle School 0001

Results Options

Rename Devices

Screen: Both

Text:

Use device name

Certificate: certificate.der

Install Wallpaper on Devices





Basic iPad Setup and Prepare

Get Connected Devices

Restore Devices

Prepare Devices

Rename Devices

Install Wallpaper on Devices

Library Media Actions Variables

Acorn Apple Configurator 2 Automator Calendar Contacts Dictionary DVD Player Finder Font Book Image Capture iPhoto iTunes Keynote Mail PDF Pixelmator Preview QuickTime Player Safari Spotlight System

Copy Documents to Devices Erase Devices Get Connected Devices

eMail: admin@woodburymiddle.ca.edu Phone: 408-555-1234

Configure iOS setup assistant:

Prepare Dev Rename Dev Restore Devices

Results Options

Rename Devices

Example: Woodbury Middle School 0001

Results Options

Screen: Both

Text: Use device name

Certificate: certificate der

Library

Stop Run

Install Wallpaper

Action will copy a JPEG file to the specified devices and set it to the default wallpaper using the indicated parameters.

This action works only with supervised devices and requires certificate files.

Output: (Text) EC Options: There is text to be





Basic iPad Setup and Prepare

Record Step Stop Run

Actions Variables

Dept: _____

Address: 123 Infinite Loop, Cupertino, CA 95014

eMail: admin@woodburymiddle.ca.edu Phone: 408-555-1234

Configure iOS setup assistant:

Apple ID Location Display Zoom Siri
 Apple Pay Passcode Terms of Service
 Diagnostics iCloud Backup Touch ID

Results Options

Rename Devices

Base name: Woodbury Middle School

Starting number: 1 Minimum digits: 0000

Separator: space

Example: Woodbury Middle School 0001

Results Options

Install Wallpaper on Devices

Image file: Woodbury Vertical.jpg

Screen: Both

Text: _____ Use device name

Certificate: certificate.der

Private Key: private-key.der

Results Options

Install Wallpaper on Devices

This action will copy a JPEG file to the specified devices and set it to the default wallpaper using the indicated parameters.

This action works only with supervised devices and requires the use of certificate and private key files.

Output: (Text) ECID Identifiers

Options: There is an option to indicate a short amount of text to be overlaid on the device lock screen.

Library Media

Actions Variables

Choose Connected Devices

Copy Documents to Devices

Erase Devices

Get Connected Devices

Install Apps on Devices

Install Profiles on Devices

Install Wallpaper on Devices

New Property Placeholder for Devices

Prepare Device

Rename Device

Restore Devices

Acorn

Apple Configurator 2

Automator

Calendar

Contacts

Dictionary

DVD Player

Finder

Font Book

Image Capture

iPhoto

iTunes

Keynote

Mail

PDF

Pixelmator

Preview

QuickTime Player

Safari

Spotlight

System





Basic iPad Setup and Prepare

Record Step Stop Run

Actions Variables

Dept: _____

Address: 123 Infinite Loop, Cupertino, CA 95014

eMail: admin@woodburymiddle.ca.edu Phone: 408-555-1234

Configure iOS setup assistant:

Apple ID Location Display Zoom Siri
 Apple Pay Passcode Terms of Service
 Diagnostics iCloud Backup Touch ID

Results Options

Rename Devices

Base name: Woodbury Middle School

Starting number: 1 Minimum digits: 0000

Separator: space

Example: Woodbury Middle School 0001

Results Options

Install Wallpaper on Devices

Image file: Woodbury Vertical.jpg

Screen: Both

Text: _____ Use device name

Certificate: certificate.der

Private Key: private-key.der

Results Options

Install Wallpaper on Devices

This action will copy a JPEG file to the specified devices and set it to the default wallpaper using the indicated parameters.

This action works only with supervised devices and requires the use of certificate and private key files.

Output: (Text) ECID Identifiers

Options: There is an option to indicate a short amount of text to be overlaid on the device lock screen.





Untitled 4 — Edited

Record Step Stop Run

Save As: Tags:

File Format: Workflow

Hide extension Cancel

Certificate: Private Key:

Results Options

Library Media

Actions Variables

Library

- Acorn
- Apple Config
- Automator
- Calendar
- Contacts
- Dictionary
- DVD Player
- Finder
- Font Book
- Image Capture
- iPhoto
- iTunes
- Keynote
- Mail
- PDF
- Pixelmator
- Preview
- QuickTime Player
- Safari
- Spotlight
- System

iCloud

- Automator

Favorites

- Recents
- iCloud Drive
- Applications
- Library
- Desktop
- Documents
- Downloads
- Pictures

Install Wall

This action will copy a JPEG file to the default wallpaper on a supervised device.

Output: (Text) ECID Identifiers

Options: There is an option to indicate a short amount of text to be overlaid on the device lock screen.

A large black arrow points to the "Actions" tab in the sidebar.



Untitled 4 — Edited

Save As: Basic iPad Setup and Prepare

Tags:

File Format: Workflow

Hide extension

New Folder

Cancel Save

Certificate: certificate.der

Private Key: private-key.der

Results Options

This action works only with supervised devices and requires the use of certificate and private key files.

Output: (Text) ECID Identifiers

Options: There is an option to indicate a short amount of text to be overlaid on the device lock screen.

Record Step Stop Run

Library Media

Actions Variables

Library

Acorn

Apple Configuration Profile

Automator

Calendar

Contacts

Dictionary

DVD Player

Finder

Font Book

Image Capture

iPhoto

iTunes

Keynote

Mail

PDF

Pixelmator

Preview

QuickTime Player

Safari

Spotlight

System

iCloud

Automator

Favorites

Recents

iCloud Drive

Applications

Library

Desktop

Documents

Downloads

Pictures

Install Wallpapers

Action will copy a JPEG file to the default wallpaper using the specified certificate and private key files.

Output: (Text) ECID Identifiers

Options: There is an option to indicate a short amount of text to be overlaid on the device lock screen.

Robot icon holding a large screwdriver

Blue circular icon with a white smartphone



Basic iPad Setup and Prepare

Record Step Stop Run

Actions Variables

Dept: _____

Address: 123 Infinite Loop, Cupertino, CA 95014

eMail: admin@woodburymiddle.ca.edu Phone: 408-555-1234

Configure iOS setup assistant:

Apple ID Location Display Zoom Siri
 Apple Pay Passcode Terms of Service
 Diagnostics iCloud Backup Touch ID

Results Options

Rename Devices

Base name: Woodbury Middle School

Starting number: 1 Minimum digits: 0000

Separator: space

Example: Woodbury Middle School 0001

Results Options

Install Wallpaper on Devices

Image file: Woodbury Vertical.jpg

Screen: Both

Text: _____ Use device name

Certificate: certificate.der

Private Key: private-key.der

Results Options

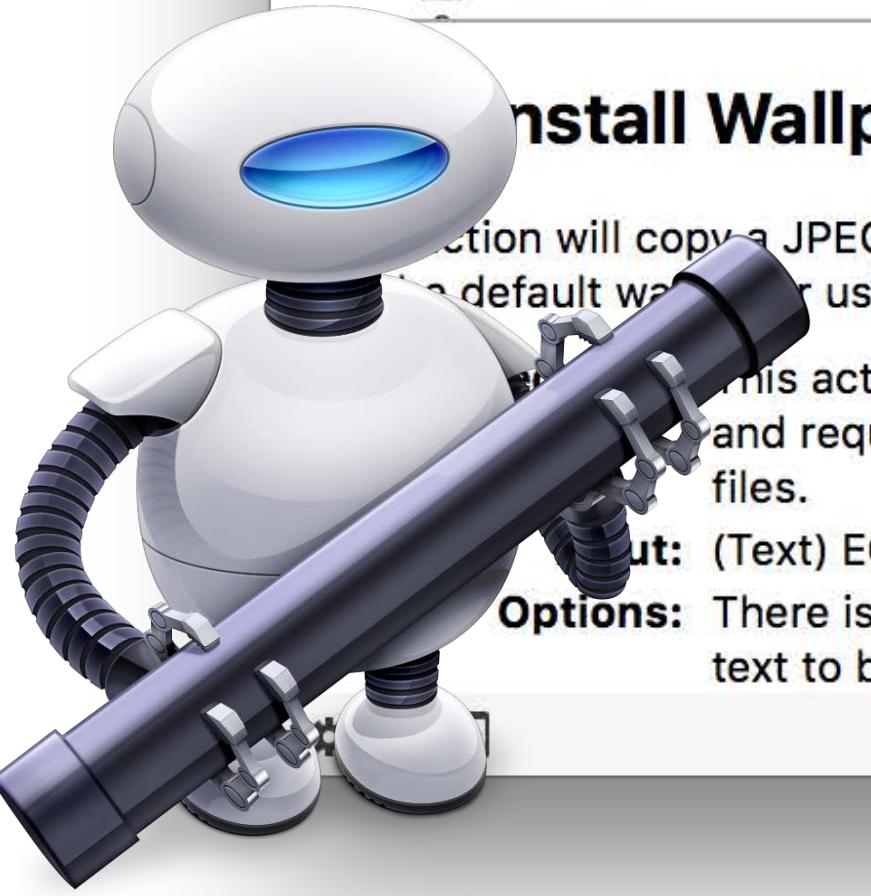
Install Wallpaper on Devices

This action will copy a JPEG file to the specified devices and set it to the default wallpaper using the indicated parameters.

This action works only with supervised devices and requires the use of certificate and private key files.

Output: (Text) ECID Identifiers

Options: There is an option to indicate a short amount of text to be overlaid on the device lock screen.





Automator

File

Edit

Format

View

Workflow

Action

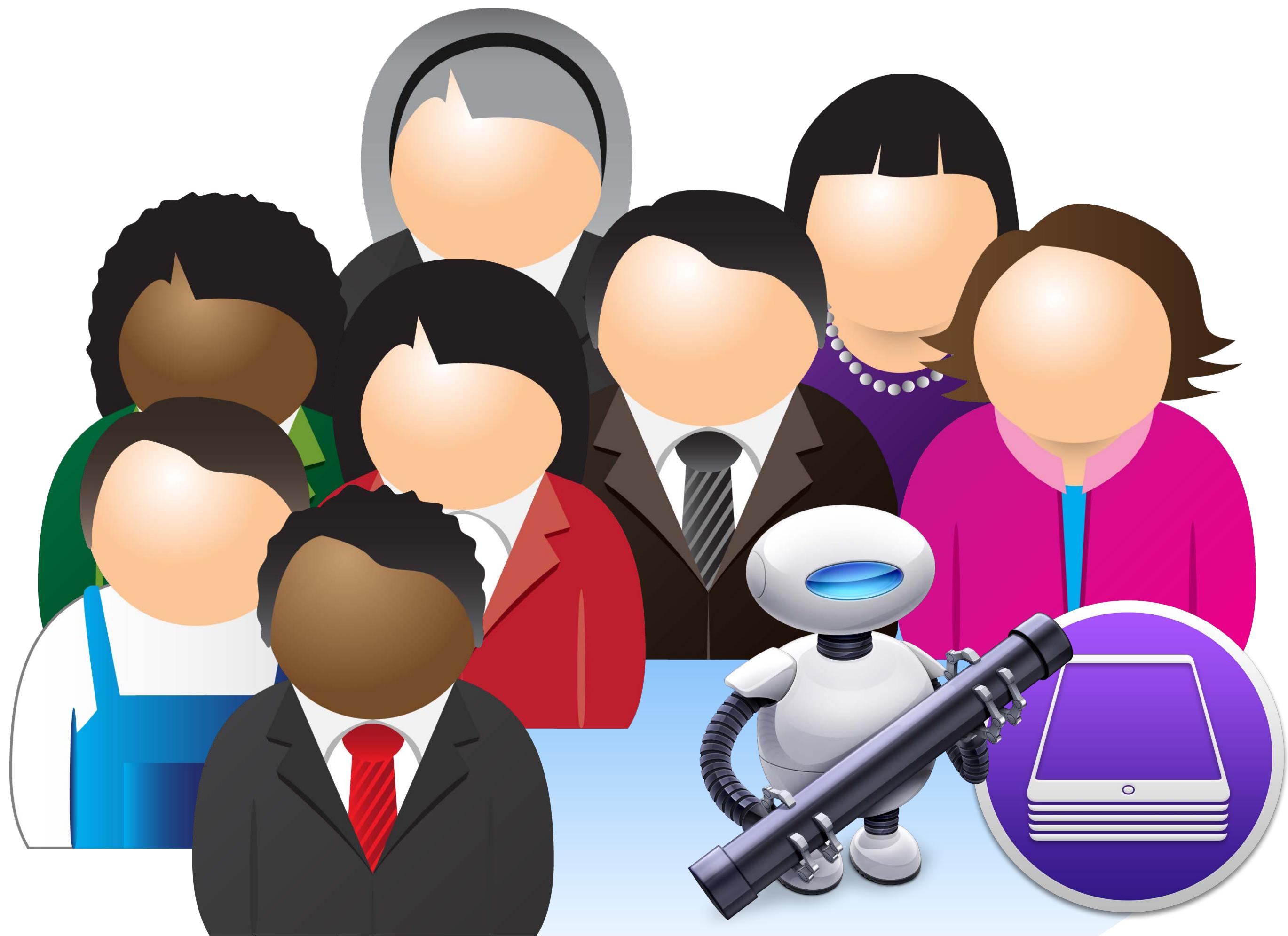
Window

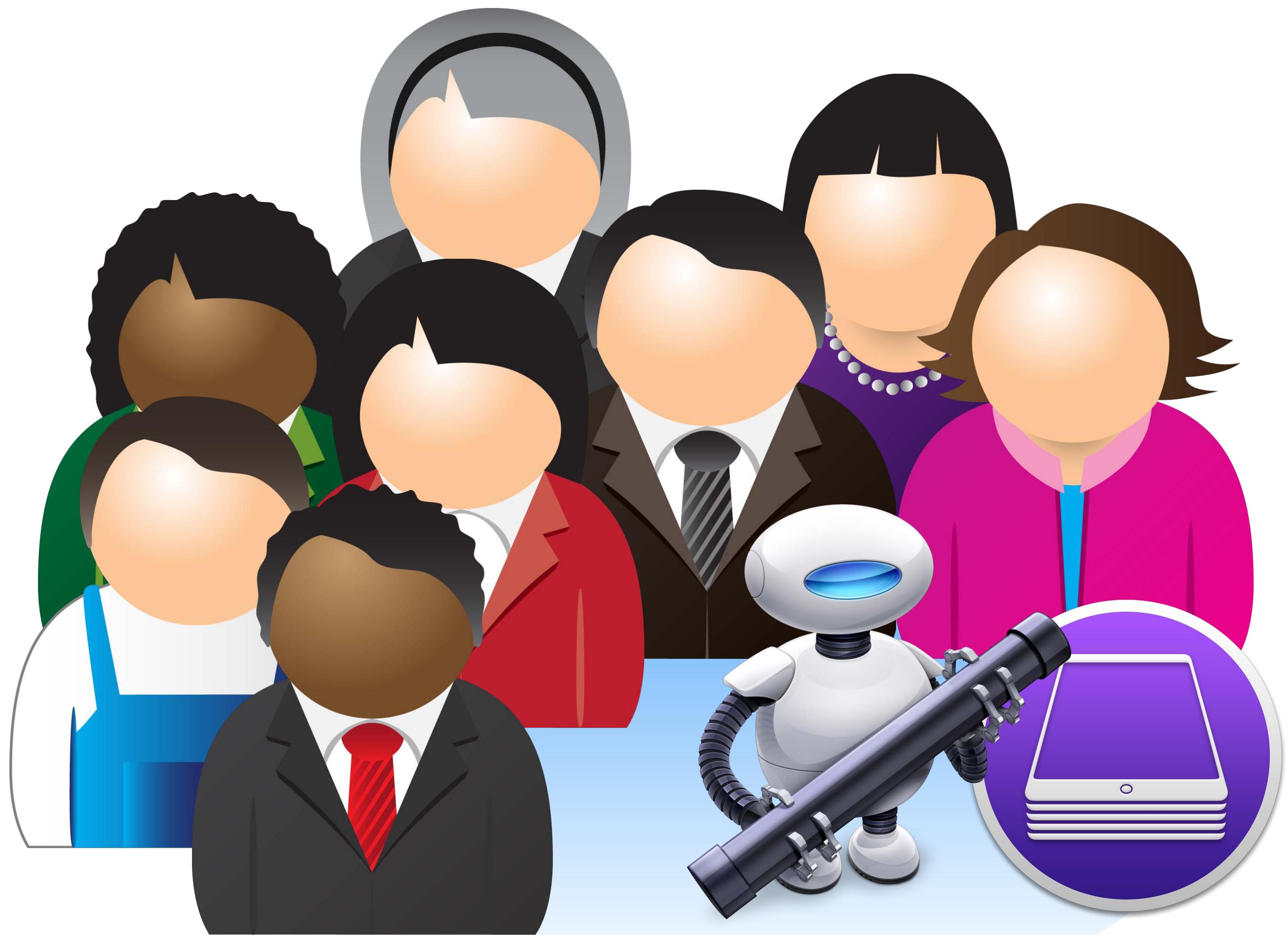


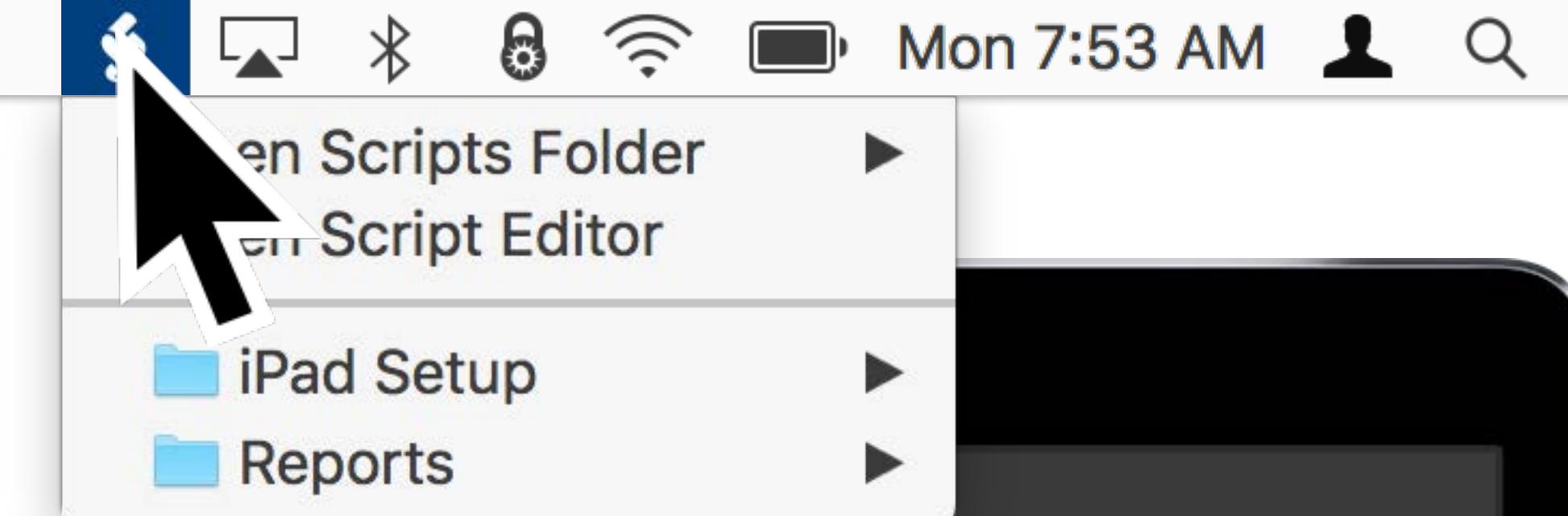
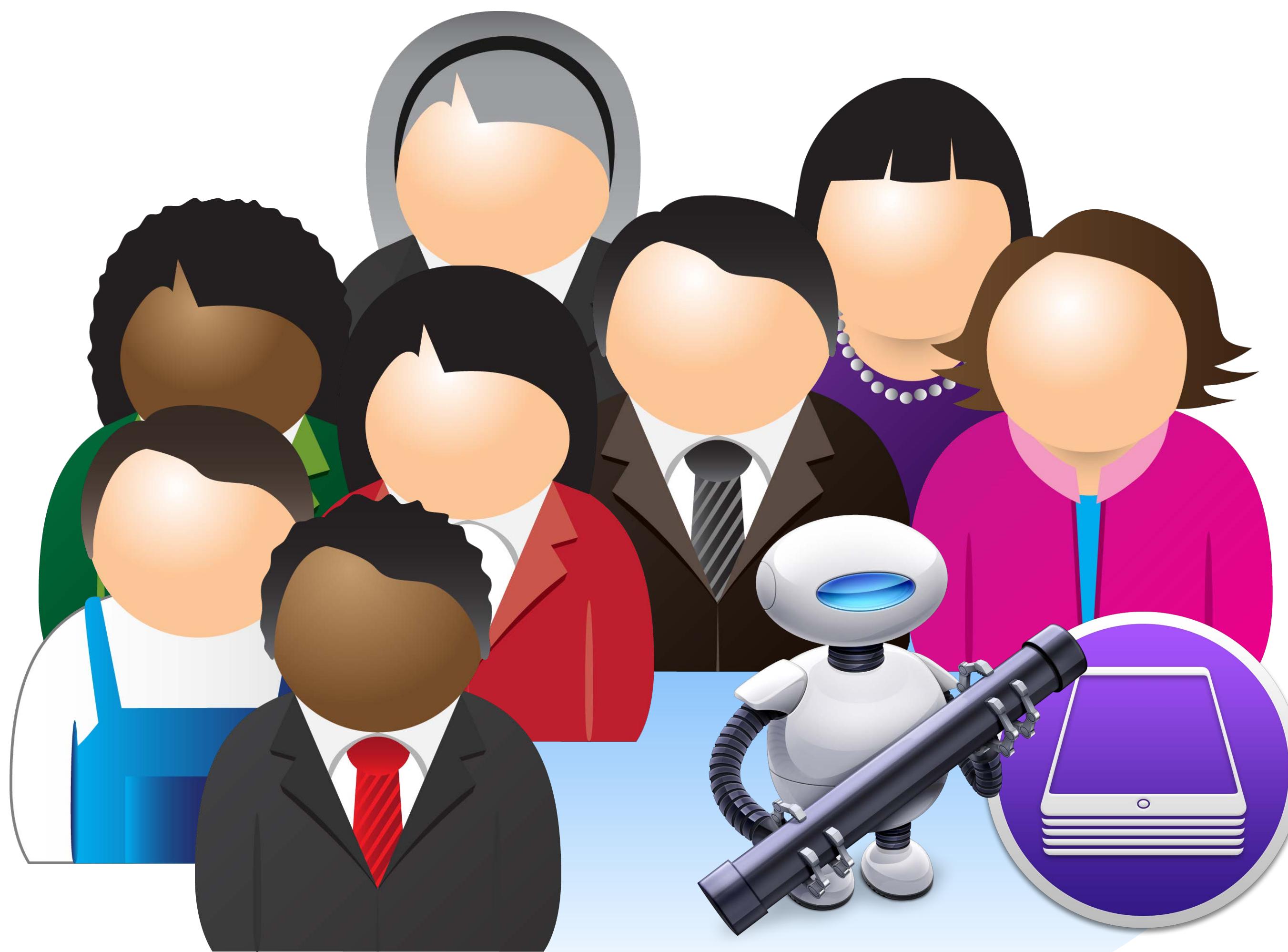
Mon 7:53 AM

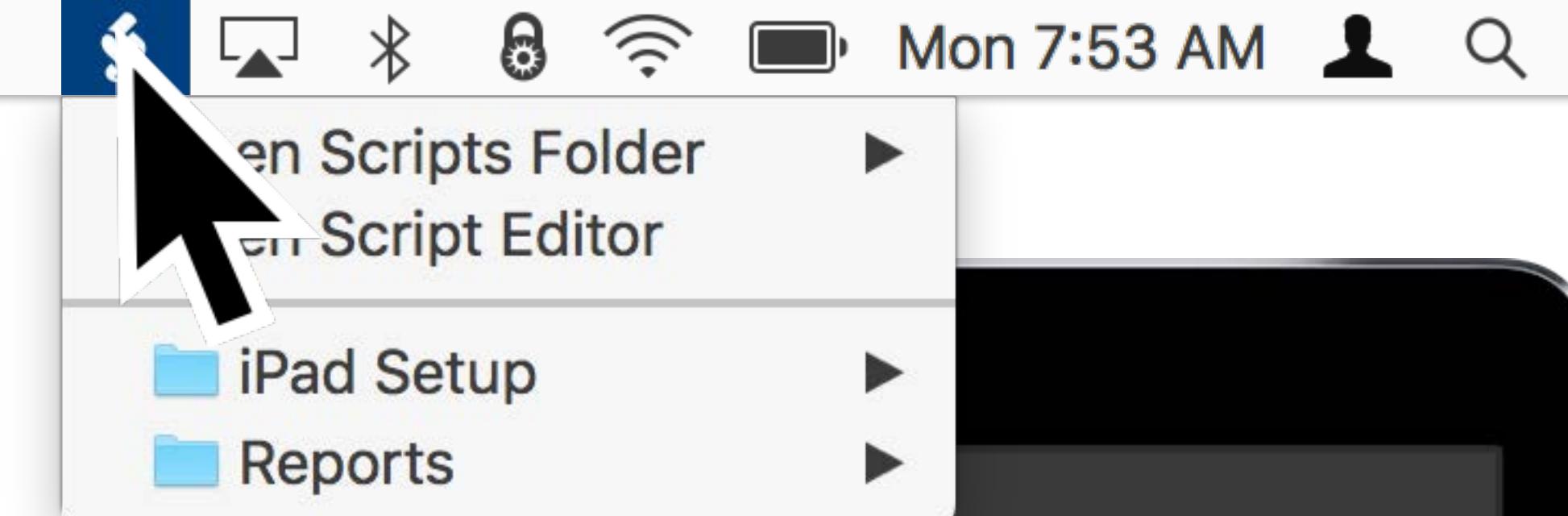
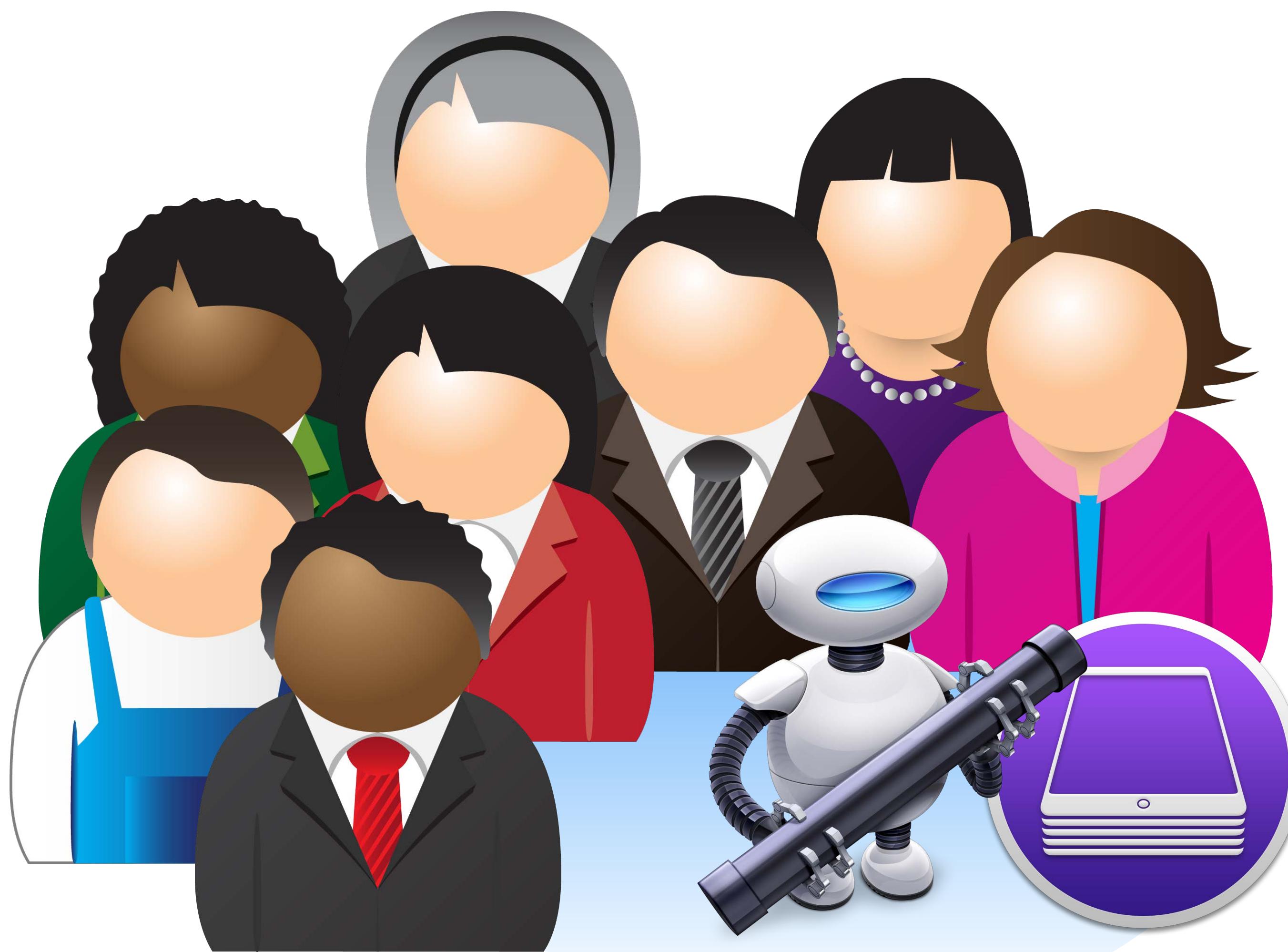


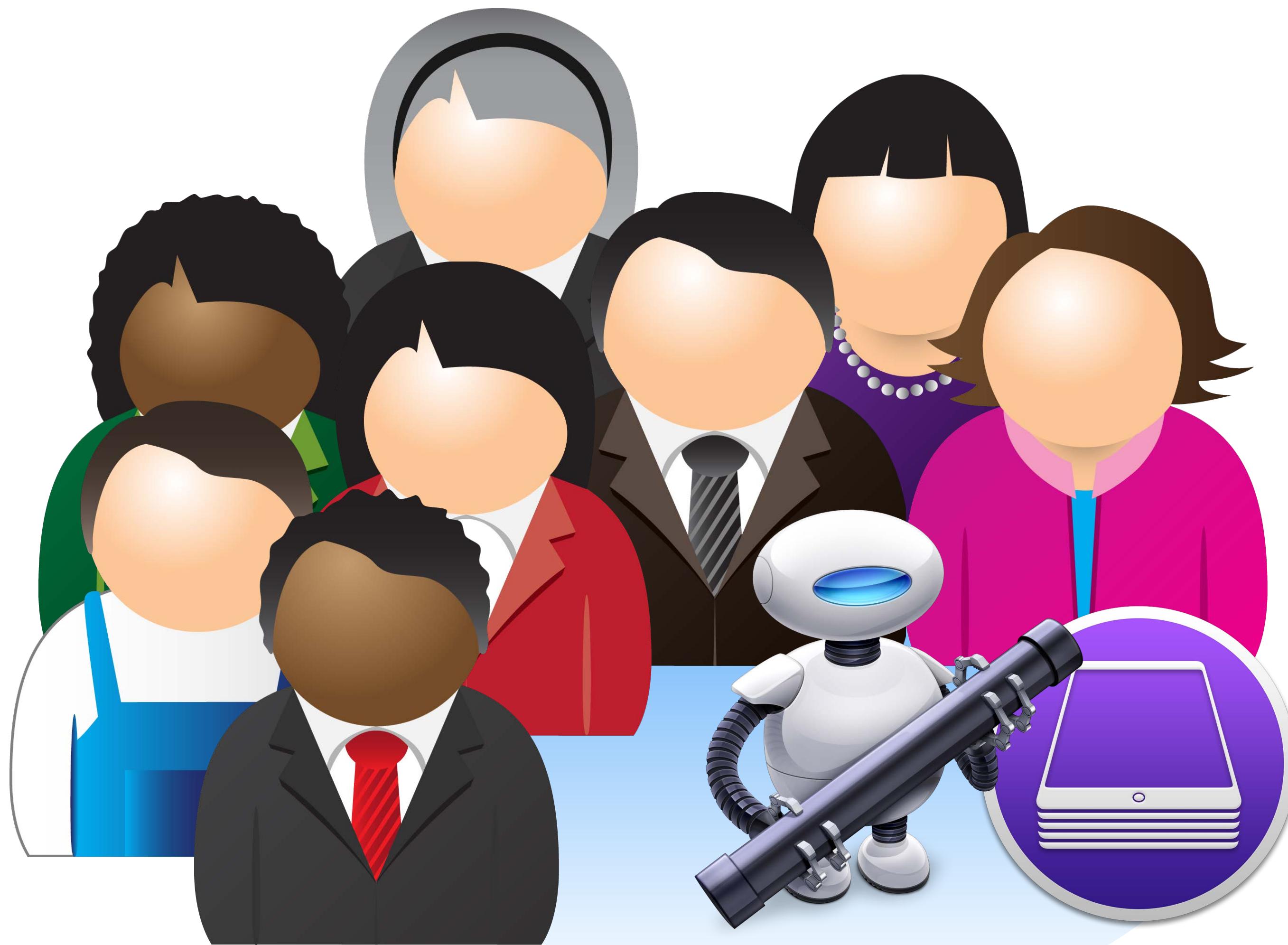




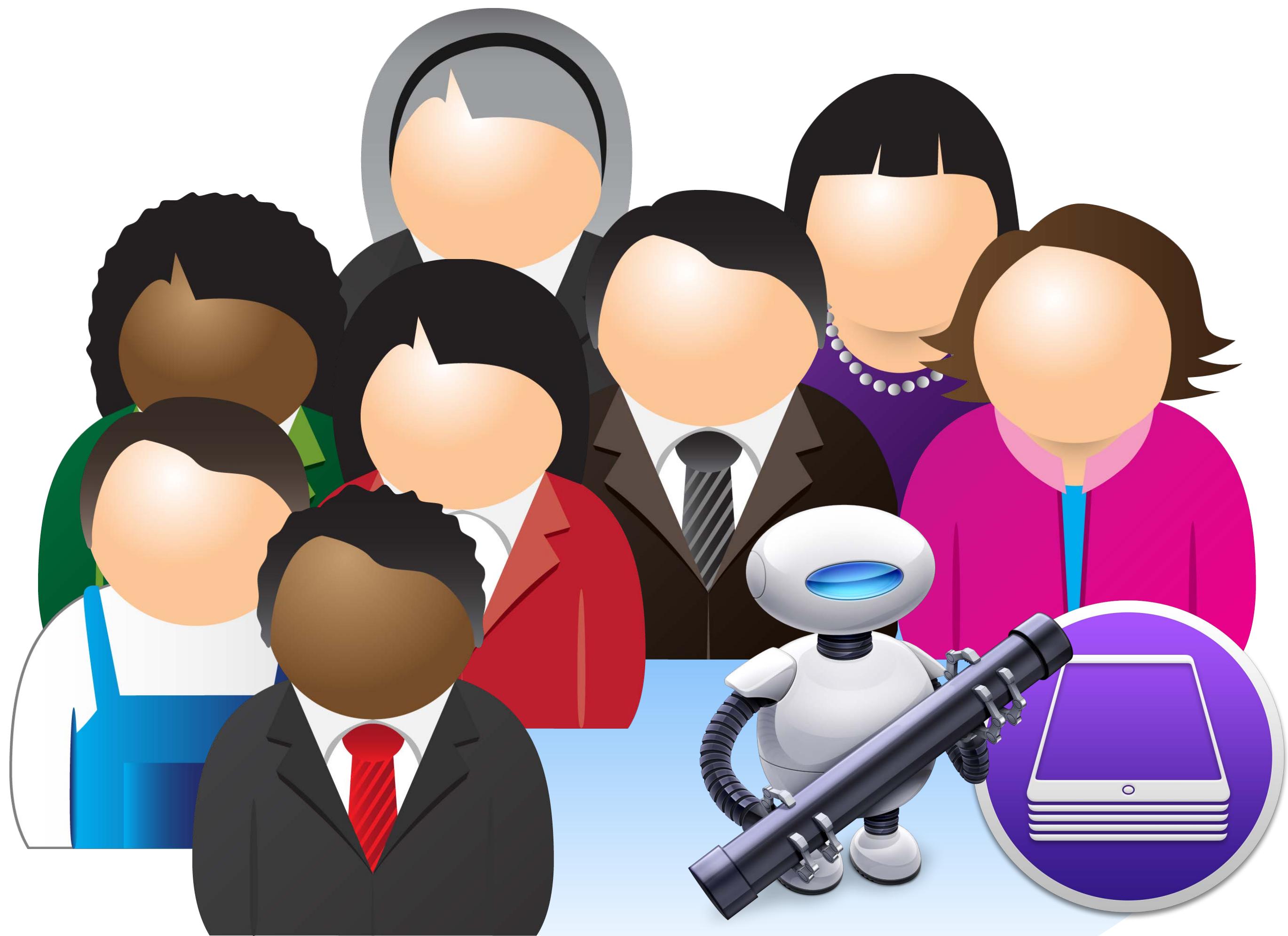


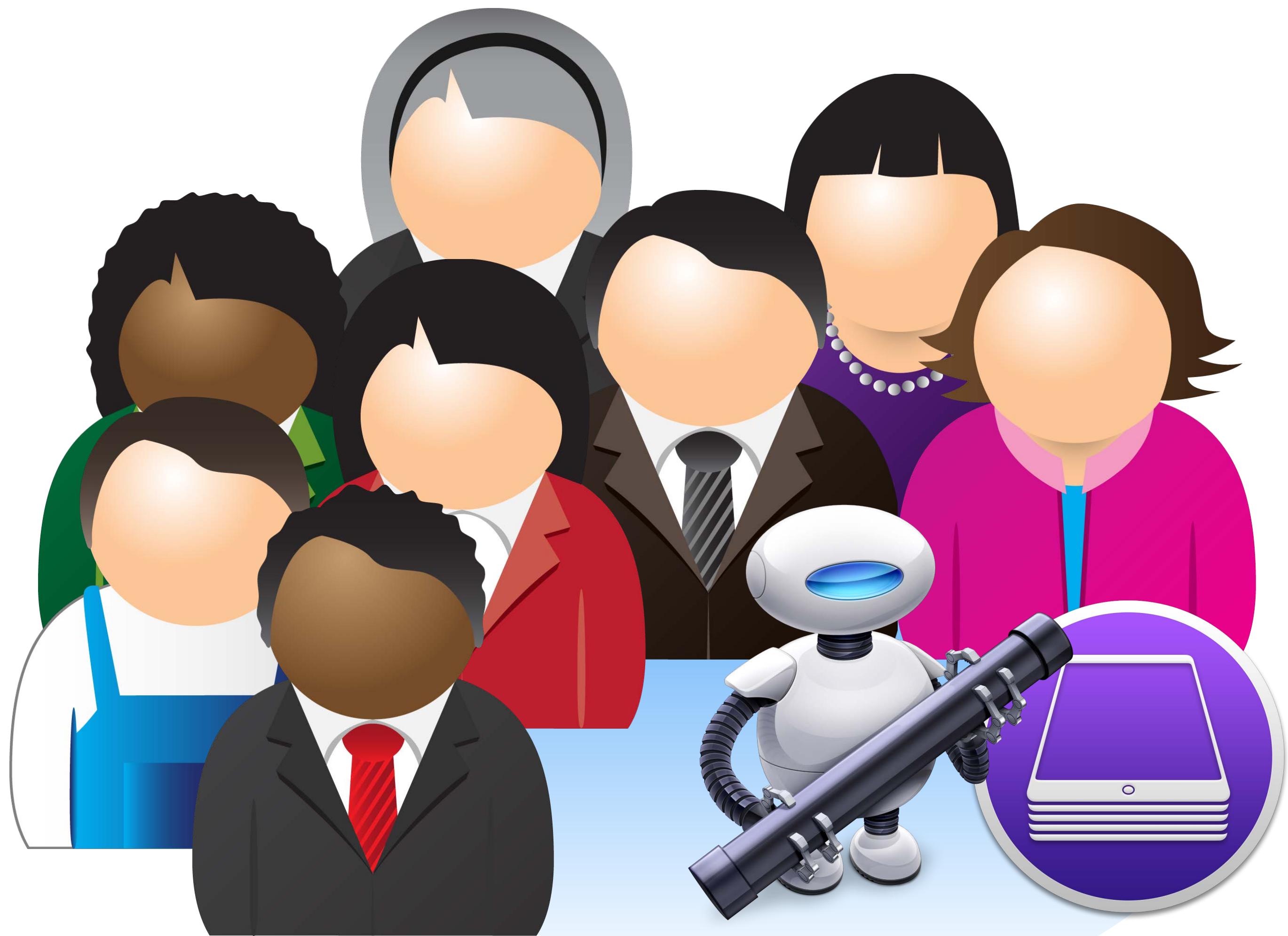


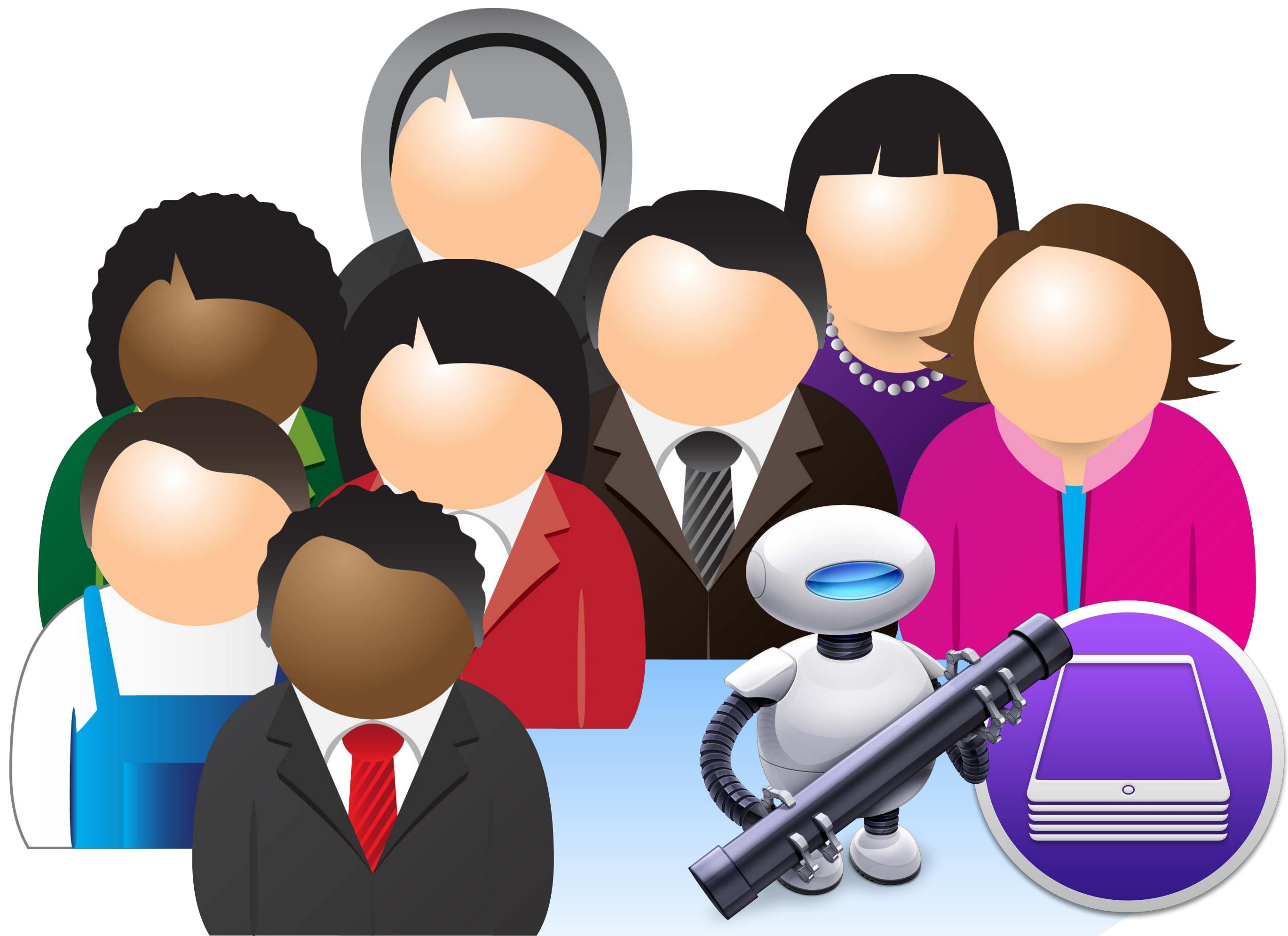


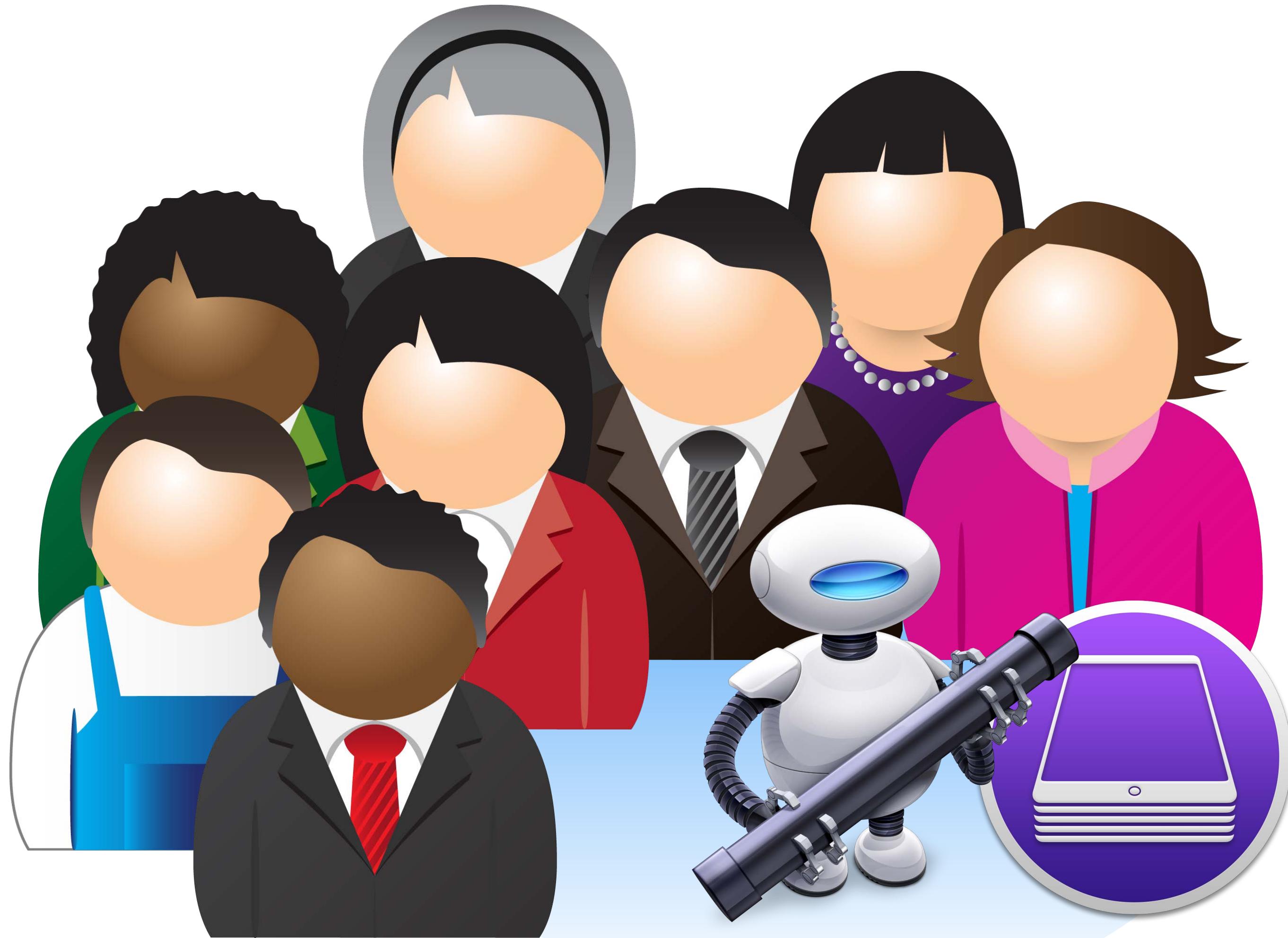


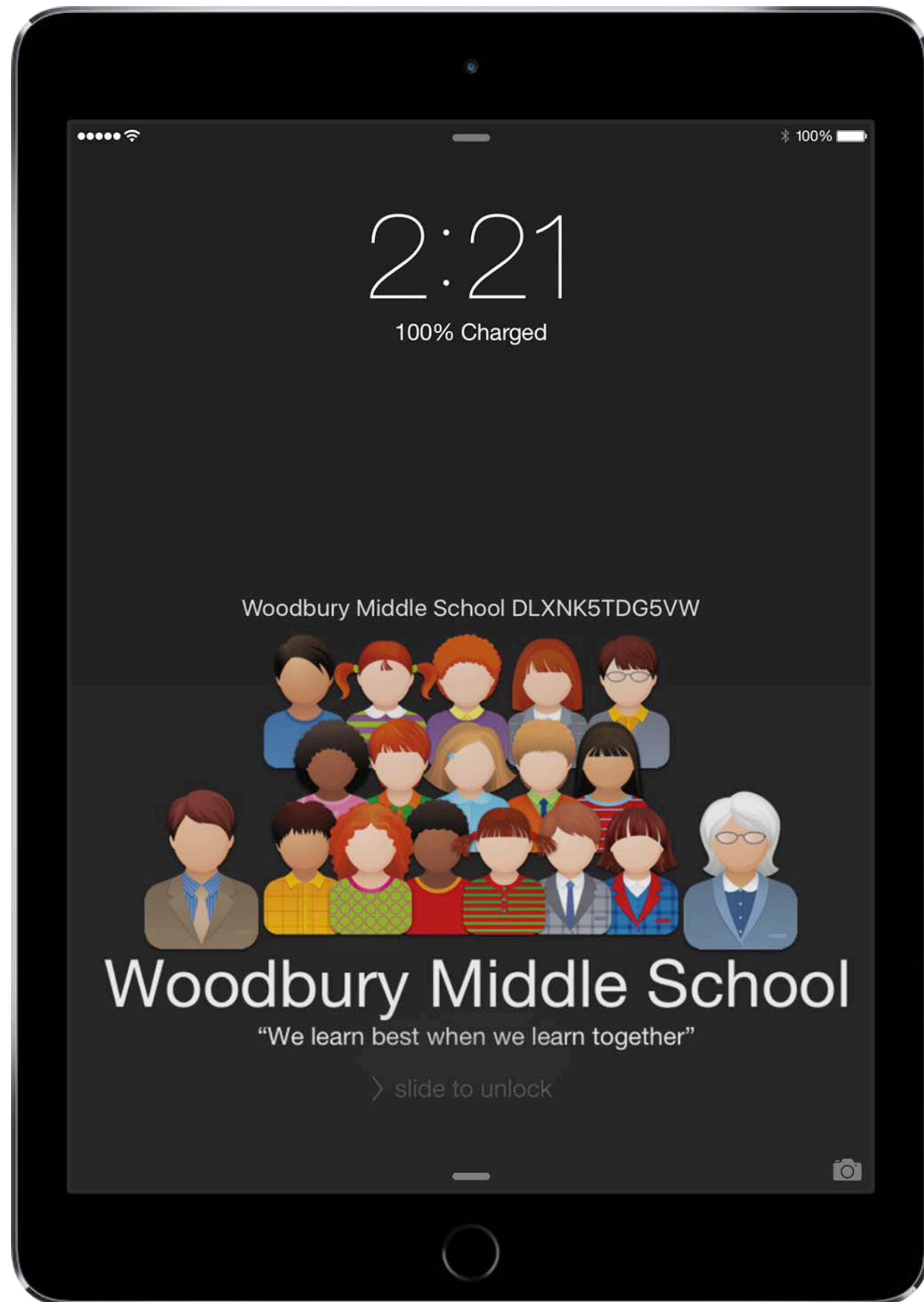
- Open Scripts Folder ►
- Open Script Editor
- iPad Setup
- Reports

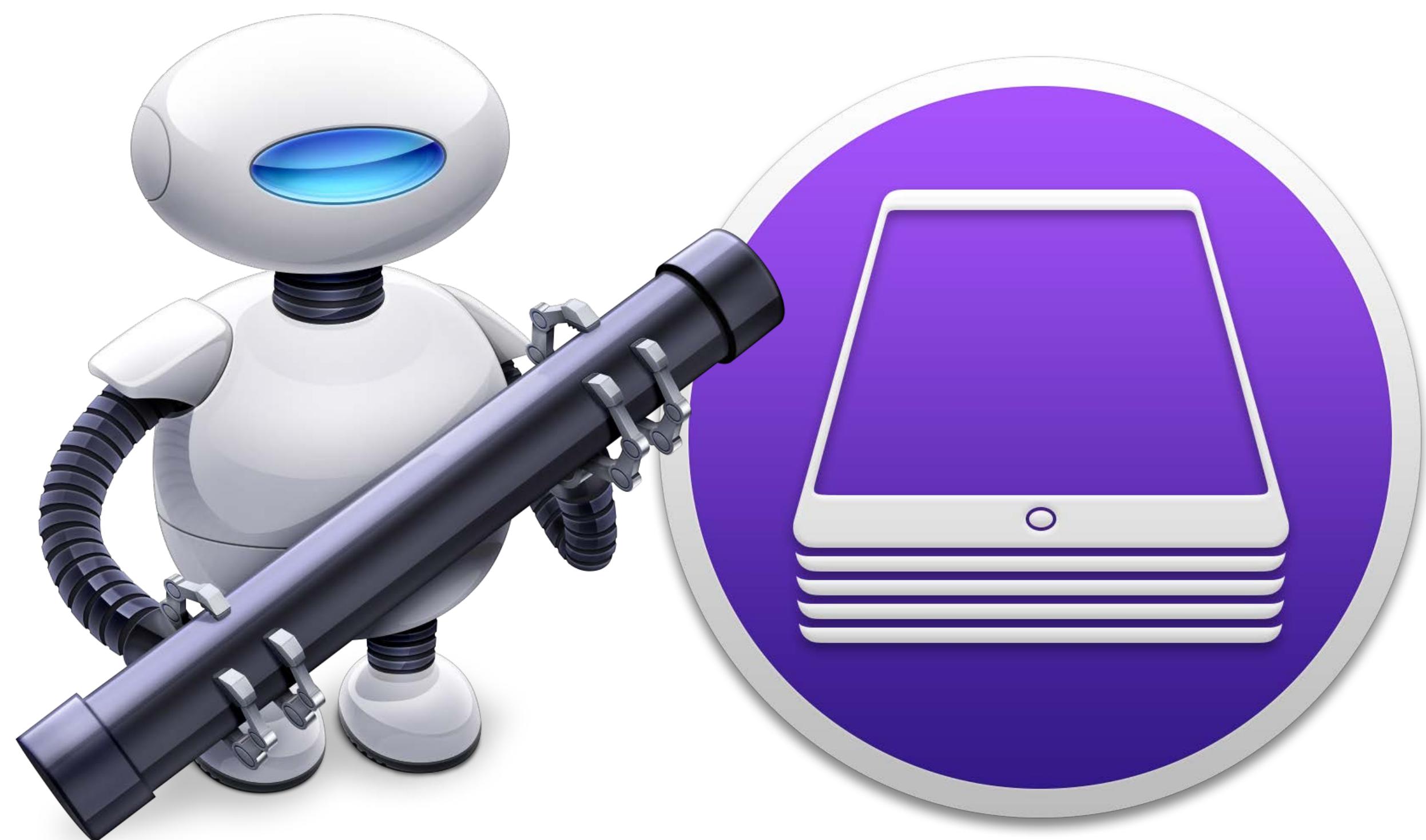


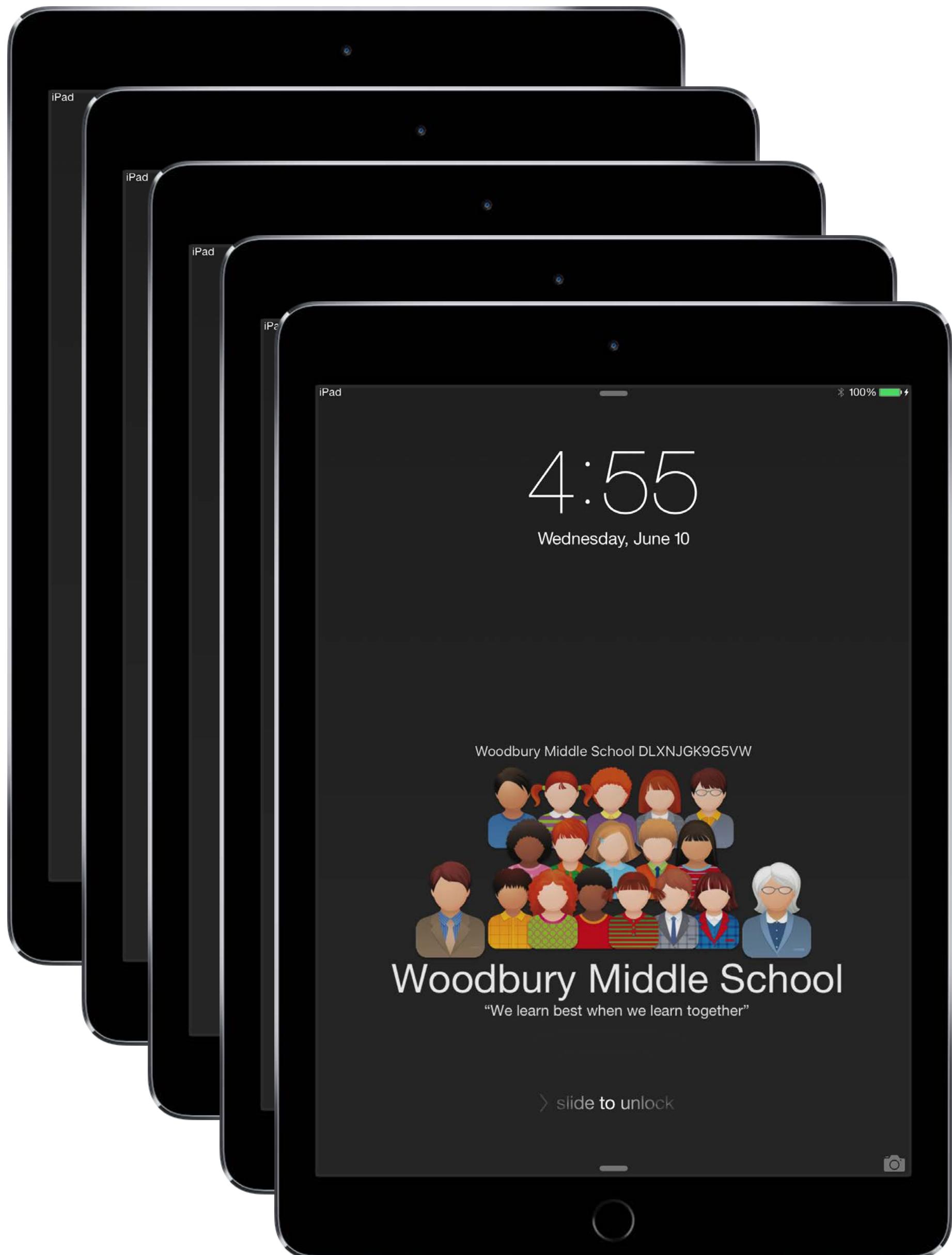


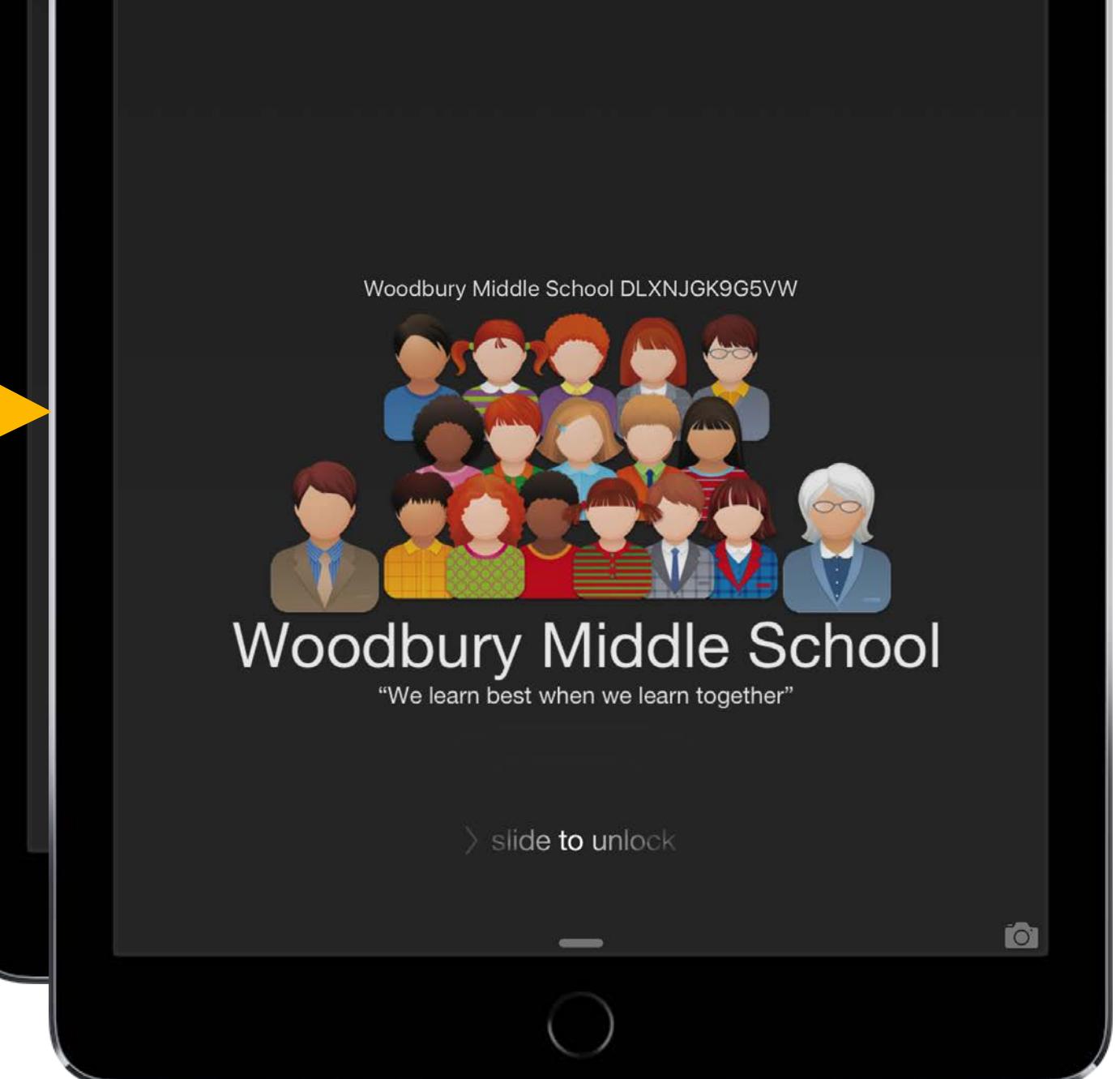
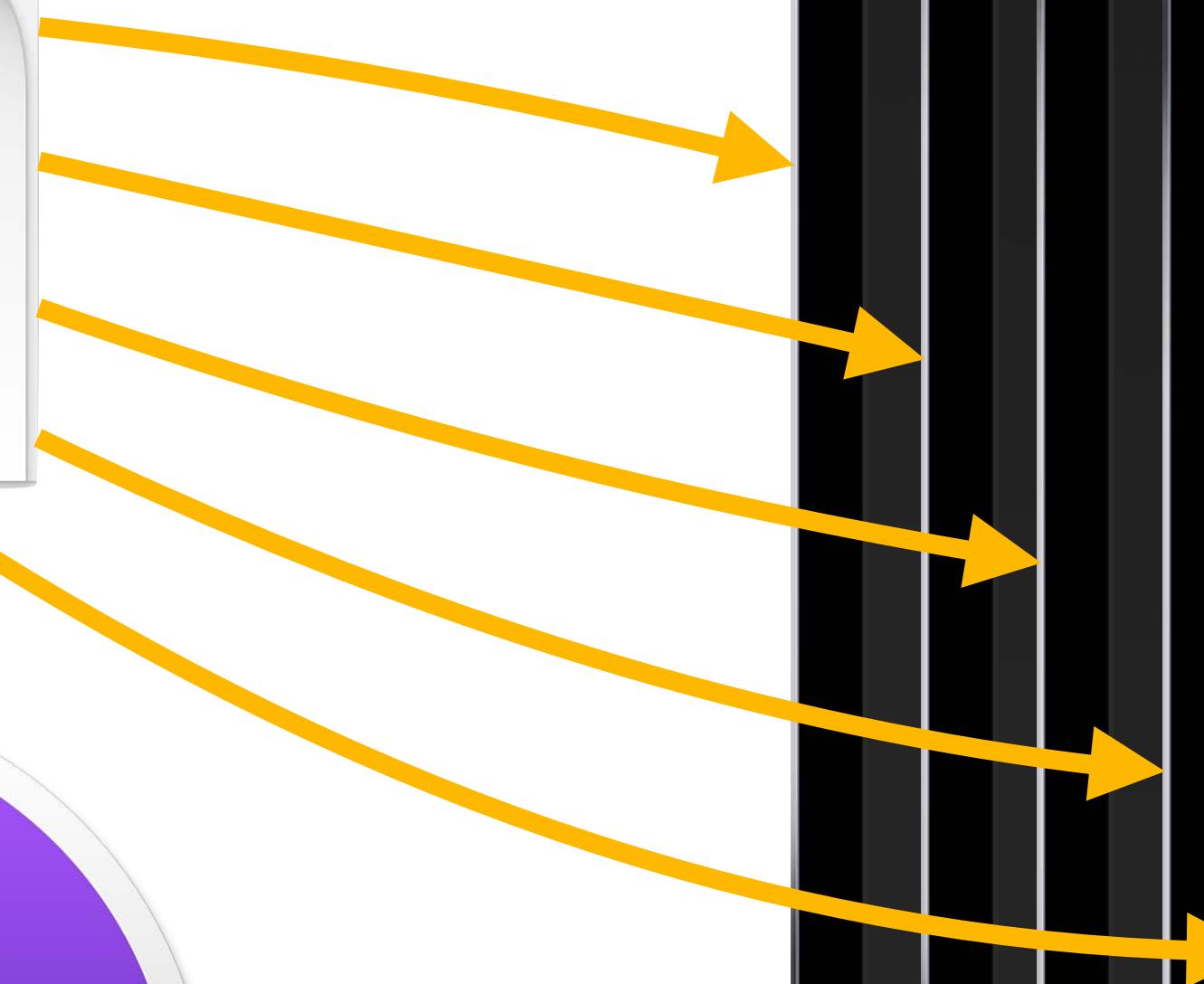
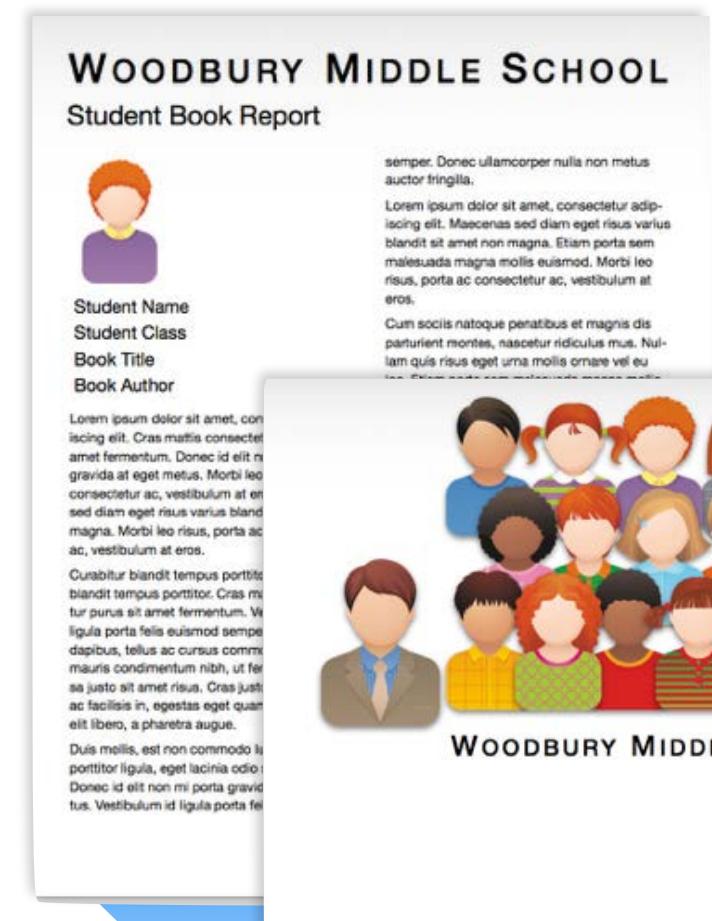












Demo

Automator actions for Configurator

Sal Soghoian
Product Manager Automation Technologies

Automating Setup of iOS Devices

Apple Configurator 2 and Automator

Create easy-to-use configuration tools

- Integrated Automator actions support modular workflow design
- Save workflows to system-wide Script Menu

Customization via an integrated Script Library

- AppleScript
- JavaScript for Automation (JXA)

<https://configautomation.com>

Automator actions for Apple Configurator

Automating the Setup of iOS Devices

Device preparation for the “Accidental Administrator”

Automation and OS X

Supporting the Enterprise with OS X Automation

Automation and OS X

Supporting the Enterprise with OS X Automation

Workflow Strategies

- Use all available tools
- Eliminate bottlenecks, repetition, and complexity
- Success = AND not OR

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Resources

- photosautomation.com
- configautomation.com
- iworkautomation.com
- macosxautomation.com

Related Sessions

What's New in Managing Apple Devices

Nob Hill

Tuesday 11:00AM

Related Labs

Education and Enterprise Development and Deployment Lab

Frameworks Lab D Thursday 12:00PM

Education and Enterprise Development and Deployment Lab

Frameworks Lab C Friday 2:30PM

 **WWDC 15**

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