

# 3D Touch

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# 3D Touch是什么

- 3D Touch是通过对屏幕施加不同程度的压力来访问附加功能。应用可以通过显示菜单、展示其他内容和播放动画等形式来表现3D Touch，该功能从6s及其以上机型开始得到支持，iOS9以上。
- 压力大小值(UITouch)
- 判断设备是否支持(UITraitEnvironment)

# 3D Touch能做什么

- 1、Home Screen Quick Actions(主屏快捷操作)
- 2、Peek and Pop(预览跳转)
- Live Photos(动图)

# Home Screen Quick Actions



# Home Screen Quick Actions (注意点)

- Create quick actions for compelling, high-value tasks.  
(developers can provide total four)
- Avoid using quick actions to ease navigation.
- Avoid making unpredictable changes to quick actions.
- Provide a succinct title for each quick action.
- Don't use quick actions for notification.
- Provide a recognizable icon for each quick action.
- Don't use an emoji in place of an icon.

# Home Screen Quick Actions(使用-Demo)

- 静态添加快捷操作(Static quick actions)
- 动态添加快捷操作(Dynamic quick actions)

# 静态添加快捷操作

通过静态的方式添加快捷操作：这种方式主要是在项目的Info.plist文件中添加相关的属性。

▼ UIApplicationShortcutItems	↕	Array	(2 items)
▼ Item 0		Dictionary	(4 items)
UIApplicationShortcutItemIconType		String	UIApplicationShortcutIconTypeShare
UIApplicationShortcutItemTitle		String	红包
UIApplicationShortcutItemType		String	com.caifuxq.redbag
▼ UIApplicationShortcutItemUserInfo	+ -	Dictionary	↕ (0 items)
▼ Item 1		Dictionary	(4 items)
UIApplicationShortcutItemIconFile	+ -	String	3dtouch_invite
UIApplicationShortcutItemTitle		String	邀请好友
UIApplicationShortcutItemType		String	com.caifuxq.invitefriends
▼ UIApplicationShortcutItemUserInfo		Dictionary	(1 item)
url		String	<a href="http://ykapptest2.jiandollar.net/app/activity/h5/getInvitationList">http://ykapptest2.jiandollar.net/app/activity/h5/getInvitationList</a>

# 动态添加快捷操作

- 通过动态的方式添加快捷操作：这种方式主要通过代码的形式把shortcutItems对象数组传递给UIApplication单例对象



# Home Screen Quick Actions显示 Widget

- iOS 10 中，快捷菜单同时可以附带显示一个 Widget，也就是以前的 App Extension。如果你提供了多个 Extension，可以在 Info.plist 中添加 UIApplicationShortcutWidget，其 Value 代表快捷菜单中展示的 Extension 的 Bundle id.

# Peek and Pop(注意点)

- Use peeking to provide live, content-rich previews
- Design big-enough peek views
- Adopt Peek and Pop consistently
- Avoid displaying button-like elements in a peek view
- Allow every peek to be popped
- Don't enable peeking and an edit menu for the same item
- Provide action buttons when appropriate
- Avoid providing an action button that opens a peeked item
- Don't make peek the only way to perform item actions

# Peek and Pop(使用-Demo)

- 让需要预览的 ViewController 遵循 `UIViewControllerPreviewingDelegate` 协议
- 调用 `registerForPreviewing(with:sourceView:)` 注册该 ViewController
- 在 `preview` 代理方法中提供一个预览的 ViewController, 并设置好 `context` 的 `sourceRect`.
- 在 `commit` 代理方法中, 直接调用 `show(_:sender:)` 即可

# Peek and Pop

- UIWebView和WKWebView 中allowsLinkPreview属性，控制是否支持3D Touch
- 默认Peek和Pop会通过Safari Services framewrok中的SFSafariViewController类自动侦测链接和数据
- WKUIDelegate

# 参考资料

- <https://developer.apple.com/design/human-interface-guidelines/ios/user-interaction/3d-touch/>
- <https://developer.apple.com/design/human-interface-guidelines/ios/extensions/home-screen-actions/>
- <https://developer.apple.com/design/human-interface-guidelines/ios/extensions/widgets/#home-screen-quick-action-widgets>

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