# What's New in iOS 4

iOS 4 is the next generation of the world's most innovative mobile operating system. Its unique capabilities and new technologies will change what's possible on a mobile platform.

## iOS SDK 4

With a rich set of over 1,500 new APIs, iOS SDK 4 provides you with an amazing range of technologies to enhance the functionality of your iPhone and iPod touch apps. Registered Apple Developers can visit the iOS Dev Center to download the iOS SDK 4 now.

**Get Started**  iOS SDK 4 is available for download to registered Apple Developers. Not registered? **Learn more**

Multitasking | iAd | Game Center | New APIs | New Tools | Compatibility

## Multitasking

iOS 4 delivers seven new multitasking services that allow your apps to perform tasks in the background while preserving battery life and performance. These multitasking services include:

- **Background audio** – Allows your app to play audio continuously. So customers can listen to your app while they surf the web, play games, and more.
- **Voice over IP** – Your VoIP apps can now be even better. Users can now receive VoIP calls and have conversations while using another app. Your users can even receive calls when their phones are locked in their pocket.
- **Background location** – Navigation apps can now continue to guide users who are listening to their iPods, or using other apps. iOS 4 also provides a new and battery-efficient way to monitor location when users move between cell towers. This is a great way for your social networking apps to keep track of users and their friends' locations.
- **Push notifications** – Receive alerts from your remote servers even when your app isn't running.
- **Local notifications** – Your app can now alert users of scheduled events and alarms in the background, no servers required.
- **Task finishing** – If your app is in mid-task when your customer leaves it, the app can now keep running to finish the task.
- **Fast app switching** – All developers should take advantage of fast app switching, which allows users to leave your app and come right back to where they were when they left – no more having to reload the app.

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## iAd

Apple's new mobile advertising platform, combines the emotion of TV ads with the interactivity of web ads. When users click on mobile ads they are almost always taken out of their app to a web browser, which loads the advertiser's webpage. Users must then navigate back to their app, and it is often difficult or impossible to return to exactly where they left. iAd solves this problem by displaying full-screen video and interactive ad content without ever leaving the app, and letting users return to their app anytime they choose.

iOS SDK 4 lets developers easily embed iAd opportunities within their apps, and the ads are

dynamically and wirelessly delivered to the device. Apple sells and serves the ads, and developers receive 60 percent of iAd revenue. Learn more

### Game Center

iOS SDK 4 includes the Game Kit APIs that allow you to create apps that will work with Game Center, Apple's new social gaming network. Your users can invite friends to play a game, start a multiplayer game through auto-matching, track their achievements, and compare their best scores on a leaderboard.

## New APIs

iOS SDK 4 contains over 1,500 new APIs to incorporate into your iPhone and iPod touch apps, including:

### Calendar Access
Apps can now create and edit events directly in the Calendar app with Event Kit. Create recurring events, set up start and end times and assign them to any calendar on the device.

### In-App SMS
Compose SMS messages from within apps, similar to the Mail compose sheet added in iOS SDK 3.0.

### Photo Library Access
Applications now have direct access to user photos and videos with the Media Library APIs.

### Video Playback & Capture
You now have full programmatic control over video playback and capture, using new APIs in the AV Foundation framework.

### Map Kit Improvements
Mapping applications can now include overlays that can identify regions on a map. Draw routes with annotations for customized directions and other functionalities.

### Quick Look
Applications can now present previews of documents, like attachments in Mail, using the new Quick Look APIs.

### Accelerate
Accelerate provides hundreds of mathematical functions optimized for iPhone and iPod touch, including signal-processing routines, fast Fourier transforms, basic vector and matrix operations, and industry-standard functions for factoring matrices and solving systems of linear equations.

## New in Tools

With a wealth of new tools and refinements throughout the suite of current tools, you'll find that developing amazing iPhone and iPod touch apps is easier than ever before.

### Automated testing
Automate the testing of your application by scripting touch events using the new UIAutomation Instrument.

### Performance and power analysis
Collect finely-grained performance data and track the power usage of your application using the new Time Profiler and Energy Diagnostics Instruments for iOS.

## iOS 4 Compatibility

iOS 4 works with iPhone 3G, iPhone 3GS, iPhone 4, and the second, third, and fourth-generation iPod touch. iPad support will be available in the fall. Not all features are compatible with all devices. For example, multitasking is available only

with iPhone 3GS, iPhone 4, and the third and fourth-generation iPod touch.

iPhone 3G     iPhone 3GS     iPhone 4     iPod touch (2nd, 3rd, and 4th generation)

## Become a member of the iOS Developer Program now.

Join the iOS Developer Program and start developing applications for iOS 4. The iOS Developer Program provides a complete and integrated process for developing and distributing applications for iPad, iPhone, and iPod touch.

**Learn more**

Standard Program $99/year
Enterprise Program $299/year

iOS

Accessibility

### Developers Tell Their Story

Watch developers share how iOS changed what they thought was possible on a mobile platform.

### Get Your Apps Ready for iOS 4.2

iOS Developer Program members can download the iOS SDK 4.2 beta today.

### Start Developing iPad Apps

Start developing innovative apps for iPad with iOS SDK 4

### Distribute Apps on the App Store

Gain access to a complete and integrated program for creating and distributing apps in the App Store.