



iPad Application for a Global Stock Photo Marketplace

Delivering a high-definition, responsive mobile experience for one of the world's largest stock photo repositories to expand global reach.

Overview

QBurst engineered a native iOS application optimized for iPad to provide photographers and buyers with a seamless, high-definition viewing experience. By implementing intelligent XML parsing and local SQLite synchronization, we ensured that the app remains responsive while handling large volumes of high-resolution digital assets.

- Successfully expanded user base by ensuring service availability across Apple's mobile ecosystem.
- Optimized data consumption through a smart synchronization engine that only updates newly added or purged images.



Client Profile

A pioneer in the digital photography industry, the client manages an extensive database of over 30 million stock images. Their platform serves as a vital bridge between professional photographers and global creative agencies, utilizing advanced search tools to facilitate the licensing and sale of high-quality digital media.

Challenges: Maintaining Speed at Scale

To stay ahead of mobile technology advancements, the client required a tablet experience that matched the power of their web-based search engine.

- Users expected the same speed and functionality as the desktop site, despite the hardware and bandwidth constraints of mobile devices.
- The application needed to handle high-definition image rendering while maintaining smooth transitions between portrait and landscape orientations.

- Synchronizing millions of potential image updates from the central database to a local mobile system required an efficient data-handling strategy to avoid long loading times.
- Creating an intuitive, gesture-based navigation system (like slideshows and filmstrip views) was essential to satisfy the aesthetic demands of a creative audience.

QBurst Solution: High-Performance Image Rendering & Synchronization

We developed a native iPad application focused on speed and visual fidelity. The architecture utilizes a "smart download" strategy where the app performs a full sync only on the first launch and thereafter manages incremental updates to reduce data overhead.

- **Intelligent Content Delivery:** Implemented an NSXMLParser to handle XML web services, importing only newly added images and thumbnails to the local file system.
- **Responsive Layout Engine:** Designed a landing screen where the content orientation fluidly adjusts based on the iPad's sensors, switching images between portrait and landscape modes instantly.
- **Filmstrip View (Thumbnail Popover):** A gesture-driven interface that queues up to 100 images for quick browsing.
 - **Interactive Slideshows:** Enabled one-tap maximization of thumbnails into full-screen, high-definition views.
 - **Meta Data Integration:** Every image is accompanied by detailed descriptions and tags, synced directly from the core database.
- **Database & Cache Management:** Integrated Core Data with an SQLite backend to manage image references and sort orders, while an automated purging logic removes outdated files no longer referenced by the API.

Technical Highlights

The development focused on the core frameworks of the iOS SDK to ensure a stable, future-proof application that takes full advantage of iPad hardware.

- **Native Development:** Built using Xcode and Objective-C, allowing for integrated coding, testing, and debugging within a high-performance environment.
- **Core Frameworks:** Utilized UIKit for interface design, Core Graphics for high-quality image rendering, and Foundation for essential data handling.
- **Data Layer:** Leveraged Core Data as the persistent framework to manage the local SQLite database, ensuring fast retrieval of image metadata.
- **Efficiency Logic:** Automated the synchronization process to ensure that only the delta (changes) between the local system and the server is updated during app launch.

Impact

- **Global Market Expansion:** Successfully attracted a new segment of global buyers and photographers who prefer tablet-based browsing and curation.
- **Superior Performance:** The app maintained high speed and functionality, delivering a desktop-grade experience in a mobile format.
- **Favorable User Sentiment:** The application received highly positive reviews upon its debut in the Apple App Store, specifically praising its ease of use and visual quality.
- **Platform Availability:** Fulfilled the client's objective of ensuring their 30-million-plus image library is available across all major consumer devices.