

# *Enabling Two-way Syncing between a Symbian OS Powered Mobile Handset and a Mac Computer*

### Challenge

Orbital's client was developing a multi-media application for a Symbian OS-based Smartphone that needed to feature two-way syncing between the application and a Mac computer. Because the client had limited experience developing for non-mobile platforms, they needed a partner with experience and familiarity in Mac and Symbian OS development. The project would require technology combinations never before used on the Mac. Furthermore, the client's application and the handset manufacturer's hardware and OS implementation were also still in beta and changing.

### Solution

The client chose Orbital because of Orbital's extensive Mac development experience and in-depth knowledge of Symbian OS-based devices. After completing a feasibility study to determine the compatibility and best implementation of the various technologies, Orbital set out to construct a Mac driver using Microsoft's Media Transfer Protocol (MTP), which had previously never been deployed for a Mac. Orbital also developed a two-way synchronization engine using Apple's Sync Services Framework.

### Results

Orbital delivered a robust syncing solution to the client on schedule. The client's application was capable of two-way synchronization with the target Mac application right out of the box. By meeting the client's schedule, the sync solution was made available with the client's application in time for the release of the mobile handset.

When one of Orbital's wireless clients was developing a multi-media application for a Symbian OS-based handset, it determined that the application should synchronize with a user's computer for optimal file management and portability. The client's goal was to enable two-way synchronization between the mobile device and the user's computer – logical in principle, but never easy in implementation.

The client had extensive experience developing for Symbian OS, but limited experience and resources developing on non-mobile platforms. It needed the application to sync with both Windows and Mac-based applications. While the client had some resources for Windows development, it had little experience with Mac. The client needed a development partner with extensive experience developing for the Mac OS, familiarity with Symbian OS-based devices, and ultimately, experience with communications and transfer protocols.

The client chose Orbital. Orbital's expertise and history developing for the Mac and its experience developing for the Symbian OS made it the ideal partner. In addition, Orbital had extensive knowledge of communications and transfer protocols, as well as great familiarity working with new technologies in unique implementations. This would prove to be very beneficial for successful project completion.

Given that the application would optimally rely upon Symbian's native use of Microsoft's Media Transfer Protocol (MTP), Orbital first had to complete a feasibility study for using the technology with the Mac. MTP had never before been used on a Mac, and Orbital successfully concluded that

*“Orbital developed a USB-based MTP driver for the Mac... Orbital then built a synchronization engine to Apple’s specification that was capable of handling file and meta data conflicts encountered by the client’s multi-media application.”*

the technology’s use for the project was indeed feasible.

However, enabling two-way syncing posed another challenge. Orbital would have to construct a synchronization engine capable of handling complex file and meta data conflicts using Apple’s Sync Services Framework. All development would have to adhere to Apple’s stringent standards for the new technology. Furthermore, the client’s application and handset manufacturer’s hardware and OS implementation was beta. Orbital would have to implement a non-Mac native transfer protocol, making use of technology built to specification of a brand new framework, for hardware and software that was still changing.

Orbital succeeded. Orbital developed a USB-based MTP driver for the Mac, enabling the mobile device to successfully connect. Orbital then built a synchronization engine to Apple’s specification

that was capable of handling file and meta data conflicts encountered by the client’s multi-media application. The handset-based application could successfully connect and synchronize with the target Mac-based application. Furthermore, data could be efficiently synchronized both ways.

Orbital delivered the sync solution to the client on time with the specified functionality. The client’s application was capable of two-way sync with the Mac, and the sync solution was delivered with the client’s application in time for the release of the manufacturer’s handset.

#### **About Orbital Technologies Inc.**

Orbital Technologies Inc. ([www.orbitaltech.com](http://www.orbitaltech.com)) is an established and trusted leader in software development services that provides custom software solutions across a range of platforms and technologies, including Windows, Mac, UNIX, Linux, .Net, J2EE, J2SE, J2ME, Apple iOS, Android, Windows Phone, Palm webOS, Symbian OS and other mobile embedded systems.

Orbital specializes in developing software for software companies. Orbital works with the world’s leading software and technology companies – like Adobe, Broderbund, Business Objects, Microsoft, and Riverdeep – to develop custom software components or entire applications for often complex or resource intensive projects.

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