



FIRSTCLASS[®] White Paper

Sync and Surf FirstClass Support for Mobile Users

November 2007

FIRSTCLASS[®]
Powering collaborative online communities.

FirstClass Support for Mobile Users

The widespread availability of personal computers and internet access has enabled users to get connected to their online environment in FirstClass through the FirstClass Client or a standard web browser whether they are at work, at home, in an internet cafe, or with their laptop in a wi-fi hotspot.

Despite this trend, however, users are finding it increasingly important that they have access to their FirstClass environment when they are on the go and not able to use a standard personal computer with internet access.

This demand is being fueled by the growing range of smart mobile devices that have wireless data capabilities and the ability to store data locally. This paper describes how FirstClass users can use these mobile devices to access the rich content they have within their FirstClass system.

Providing Choice - The FirstClass Differentiator

A key differentiator of FirstClass over the years has been the flexibility that it provides to end users regarding the type of computer that is used. A user can log on to FirstClass at home in the morning from a Macintosh computer, stop at an internet café on the way to work for a latte and access FirstClass via a web browser, then go to work and use a Windows or Linux machine for FirstClass. The same FirstClass features are available on all platforms.

When it comes to supporting mobile devices FirstClass endeavors to provide a similar level of choice to end users. This is, in practice, quite a challenge given the wide range of popular mobile devices available today, including standard mobile phones, smartphones, Palm/Treos, PocketPCs, Windows Mobile devices, Blackberry devices, Apple iPhones and more. There are few standards in this area and many of these devices are tied to proprietary infrastructures. Still, the FirstClass approach is to support them all in a very flexible way so that, for example, a Mac desktop user could happily use a Windows Mobile device for mobile access, and a Linux desktop user could happily use a Blackberry device.

The FirstClass Approach: “Sync and Surf”

To best meet the needs of a wide range of FirstClass users for cross-platform, cross-device mobility, FirstClass provides two distinct solutions.

One solution, called synchronization or “Sync”, is based on the idea that data is stored in both the FirstClass server AND on the mobile device, and special synchronization software ensures that both sides are kept up to date with changes made on the other side.

The other solution, “Surf”, is based on the web browsing capabilities now common in most advanced mobile devices. These two approaches are described in more detail in the following sections.

Synchronization

In this mode, the FirstClass server works with the mobile device to keep key information such as contacts, calendar events, tasks, and messages consistent between the mobile device and FirstClass. The architecture implemented is bi-directional, so information can be created or modified at either end and synchronized back to the other end.

FirstClass has based its approach to synchronization on popular industry standards that have seen widespread adoption around the world. In some cases these standards have been supported directly by the mobile device suppliers. In other cases, 3rd party software suppliers provide appropriate software that translates from the industry standards to the proprietary infrastructure of a specific device.

Unfortunately there is no single standard in widespread use that covers all key data types — including email, contacts, and calendars. The FirstClass strategy delivers support for two different standards to cover the complete range of key data types as follows.

Contacts, Calendar Events, Tasks and Memos via SyncML

One key standard supported by FirstClass is called SyncML — an open standard that is managed by the Open Mobile Alliance (see <http://www.openmobilealliance.org/>). SyncML is generally used to synchronize contacts, calendar events, tasks and memos. In theory, it can also handle messages, but so far very few vendors are supporting email via SyncML.

SyncML is widely implemented in many mobile phones and smartphones that are available today. In addition, some PDA device vendors (ie. Palm) have announced support for SyncML as well.

For mobile platforms that don't natively support SyncML there are a number of companies producing SyncML agents that are inexpensive and can add SyncML support to these proprietary platforms (such as PocketPC, Windows Mobile and Blackberry).

The SyncML protocol is supported in FirstClass via the Synchronization Services protocol module which runs via an Internet Services based extension (see diagram on the next page) that is set up by the FirstClass system administrator. Today, FirstClass supports the synchronization of contacts, calendar events, and tasks via SyncML. In a future release support will be added for synchronizing memos.

Email via IMAP

A second key standard is IMAP. IMAP has been around for a number of years and is widely used to enable user-oriented messaging applications to access mail in messaging servers in a standardized way. Many mobile devices support IMAP directly, and FirstClass has supported IMAP for quite some time. With the appropriate pieces of configuration data (account credentials, mail server name, and so on) entered on the mobile device, that device can then reach in to FirstClass to send and retrieve email.

In FirstClass 9.0 there is enhanced support for IMAP in two distinct areas:

IMAP Idle: At a high level IMAP Idle is designed to enable devices to support “Push Email” which is the concept that new email messages are “pushed” to the device the moment they arrive in a user’s mailbox on their mail server. Sometimes this is referred to as “Blackberry-like email” since the Blackberry has supported this experience for some time whereas most other mobile devices that supported email did so on a “polled” basis by checking for new email every few minutes via IMAP. IMAP Idle enables the IMAP protocol to efficiently be able to provide near-instantaneous notification of new emails arriving in a user’s mailbox. More and more devices and applications are supporting IMAP Idle in order to provide “push email.”

Messaging Optimized IMAP: Prior to release 9.0 FirstClass supported IMAP in a very “rich” way that included by default the transmission of all FirstClass desktop items and not just the contents of the FirstClass mailbox. While this provides very broad coverage, it can be time-consuming and resource-intensive for users who have a lot of items stored on their FirstClass desktop. In FirstClass 9.0, IMAP has been enhanced to support a “mailbox only” mode in which other items on the FirstClass desktop are ignored. This will significantly speed up access to FirstClass for many users using IMAP on mobile devices.

The “Sync” concept is illustrated in the following diagram:



Note: An alternative mechanism for getting email to and from some mobile devices is to simply send a copy of each email to the gateway for that device if such a gateway exists. The best example of this at work is with the Blackberry. With every Blackberry a user can have a Blackberry email account (myname@myserviceprovider.blackberry.net). If you forward FirstClass email to that account (via a mail rule, redirect, or pager notification) the Blackberry email server will automatically “push” the message out to the Blackberry device. This is a quick and easy way to get push email on a Blackberry, although using IMAP on a Blackberry provides a richer experience.

Surfing

The “Surf” solution from FirstClass takes advantage of the fact that more and more mobile devices have good support for visiting websites via standards-based web browsers.

FirstClass supports a number of different web user interfaces. These are generally referred to as “template sets” since they all access the same data, but each provides a different user interface controlled by a

“template.” One web user interface is referred to as the “mobile template” set. This web user interface is specifically designed to make it easy and efficient to navigate a FirstClass account via a handheld web browser. This is done via a number of optimizations including:

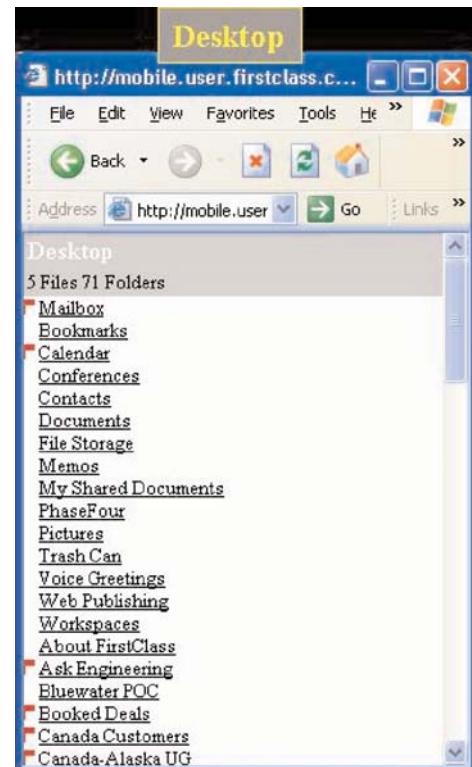
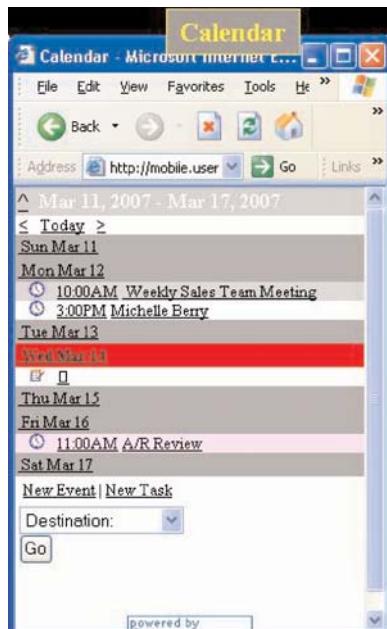
- significant reduction in the number of graphics in the user interface
- content display specifically laid out for small handheld screens
- more detailed text-based navigation menus for quick FirstClass access

With the FirstClass mobile templates it is very easy to quickly access virtually all your FirstClass content including email, contacts, calendar events, and conferences.

If you view your handheld as a “secure” device you can even store the URL to the mobile template user interface to your FirstClass system along with your user id and password, giving you “one-click” access to your FirstClass Desktop, mailbox, or calendar from your handheld’s browser.

The image to the right is an example of what a FirstClass desktop looks like via the mobile templates.

A weekly calendar view looks like this:



Similar compact and efficient displays are available for virtually all FirstClass objects including mailboxes, contacts, conferences, etc.

Summary

The “Sync and Surf” solutions described in this paper extend the long-standing FirstClass tradition of delivering practical solutions to challenging problems. FirstClass customers can continue to rely on the utmost in flexibility and choice as they determine the computing environment and the mobile device environment that best fits their particular needs.

For more information on FirstClass products or services, visit our website at www.firstclass.com or contact us directly at 1-888--808-0388 or sales@firstclass.com.