

The FirstClass Roadmap

October 2008



Introduction

Welcome to the latest version of the FirstClass Roadmap. Our next major release is FirstClass 10, and we want to use this opportunity to deliver far-reaching fundamental enhancements to FirstClass. Many of these new capabilities are very large in size and scope, and we needed to do a fair bit of research to understand what was feasible from both a content and a timeframe perspective.

The success of FirstClass has been driven by customers who have appreciated the unique abilities and value proposition of our product, and then shared their satisfaction with other potential customers. We know it is important for our ongoing success that we listen to the changing needs of our customers, and use that input to drive the evolution of our product. We obtain that input through direct customer visits, the many user group meetings that we host around the world each year, and through the Enhancement Suggestions conference on FirstClass Online.

Our 2007 FirstClass Roadmap described a broad set of features for FirstClass 9 and we managed to deliver most of them. Although some of this seems like it happened long ago, FirstClass 9.0 shipped in June of 2007 and delivered key new features such as Archiving, Unicode support, QuickFilter, Calendar Punch-through, Customizable Launch Bars, and enhanced Contact Management. FirstClass 9.1 shipped in February of 2008 and included support for authenticated personal web publishing, global signatures, enhanced calendar import/export and printing, more flexible auto-reply management, support for bullets, and an enhanced web user interface that provided a user experience closer to that of the client through the use of AJAX. Also along the way we made significant enhancements to FirstClass Synchronization Services along with broad support for a number of mobile platforms.

Looking forward, this document provides our best view at this time for the features and timelines we envision for our future releases. We know from experience that we'll end up adding in features that aren't described in this current version of the roadmap, and we know that some features we've described may not make the particular release or date that we're currently forecasting. We'll work hard to maximize the former and minimize the latter, but we can't provide any guarantees. Also, in each release we include a significant number of quality improvements to ensure that issues flagged by our customers get addressed on an ongoing basis.

In addition to the specific features covered in the roadmap, we will continue to have a strong focus on the key attributes of FirstClass that have consistently

differentiated it from other approaches over the years. These attributes include:

Strong security: The information age provides an ever-increasing set of challenges to those working to create safe and reliable electronic environments for their users. These challenges include spam, viruses, worms, hackers, denial-of-service attacks, and so on. Each FirstClass release includes enhancements to provide effective means for managing these security concerns.

Platform choice: A key strength of FirstClass is the choice we provide to system administrators and end users regarding the computing environments they can use. Our support for Windows, Macintosh, Linux, and web browsers enables flexibility that other solutions don't provide. Our support for access from telephones is unparalleled in the industry. Each release extends the range of platforms we support to ensure that our users aren't locked into one particular platform.

Total cost of ownership: Our customers find that the total cost of ownership of FirstClass when compared to alternative solutions is often one-fifth to one-tenth of the cost of competing solutions from other major vendors. With each release we add to our leadership position in this area by focusing on automated user administration, simplified software upgrades, reductions in hardware requirements, higher scalability and an expanding suite of solutions that run on the FirstClass platform.



Strategic Directions

With every release we deliver a number of feature enhancements and quality improvements in response to the needs articulated by our customers around the world. We will continue with that kind of work in FirstClass 10. However, we do believe there are some fundamental shifts in the ever-changing world of communications and collaboration software, and with FirstClass 10 we want to take a leadership position in a number of strategic areas. This section describes these areas at a high level and sets the stage for the more detailed description of what we'll be delivering in FirstClass 10 and beyond.

Mobility: Mobile data services continue to get faster, more reliable, and more widely available with advances in technologies such as 3G, Wi-Fi, and Wi-Max now rolling out around the world. Mobile handhelds continue to get more powerful and feature-rich as illustrated by offerings from the likes of Apple, RIM, Nokia, and so on. It is now possible to provide users with fast and extensive access to a wide range of information that is important to them on mobile devices. The FirstClass team is working very hard to attain a leadership position in the breadth and depth of support we provide for mobile devices. FirstClass 10 will deliver many important new capabilities in this area.

Search: Internet users around the world are now used to having access to very fast and powerful search engines such as Google to help them find items of interest across the internet. We see a key requirement from our customers to provide a similar experience within "the intranet". This task is actually much harder in some ways than what Google faces, since in the internet world everything is flat whereas within organizations there are hierarchies and associated permissions and access controls that must be respected. Despite this challenge it is strategic for us to be able to provide a "magic" search box that users can type requests into and quickly find relevancy-ranked results for information that they have permission to see.

Web User Experience: For almost 19 years the FirstClass Client has provided the premiere user experience for FirstClass customers. In the early days there really wasn't an alternative to such a client-server architecture. In the more recent past there has been the web, but the speed and user aesthetics of web applications in general has been inferior to that of a rich client. With the recent advent of new web browsers supporting new technologies (AJAX, JSON, Javascript, etc.) it is now possible to deliver a user experience that is similar to that of a rich client. Such interfaces are now available in many "Web 2.0" style applications. We now believe that this technology has sufficiently matured enough to enable us to build a compelling new user interface for FirstClass and that many customers will choose it as their premiere user experience mechanism. This will enable them to reap the many benefits of having a pure browser-based deployment (no clients to distribute, and users have the same experience on any computer). FirstClass is now embarking on a multi-step effort to deliver a cutting edge Web 2.0 style user interface for traditional FirstClass features and new FirstClass-based capabilities.

Organization Social Networking: In the last year or two there has been a

tremendous amount of interest around the world in the application of social networking offerings such as discussion groups, forums, profiles, wikis, and blogs as a new kind of collaboration tool for use within the organization and with outside people who interact with the organization. FirstClass customers have enjoyed many of these capabilities for years, and within FirstClass we have a tremendous platform for virtually all the kinds of offerings that organizations are interested in. A key strategic direction for the FirstClass team is to leverage our foundation strength in collaboration by extending the kind of collaborative features we provide (through the addition of profiles, blogs, wikis, etc.) and by doing this in a state-of-the-art web user interface (as mentioned above).

Platforms: Over the years the FirstClass team has provided one of the most flexible platform support plans in the industry. We have a strong track record of providing our client and server software on a wide range of hardware and software platforms including quite old vintages of hardware. This is important to many of our customers, and we have no desire to needlessly force our customers to buy new computers just to run our latest software. With FirstClass 10 however we do see the need to standardize our server software on 64-bit hardware and operating systems. This enables us to build much more sophisticated capabilities that exploit greater power and scalability that these platforms provide. This should not be too painful for most of our customers. Intel, AMD, and Apple have all been shipping 64-bit hardware environments since 2004, and all server platforms sold in the last few years have supported 64-bit environments. Note that we'll continue to support 32-bit client environments since those are much more broadly deployed.



Mobility

The decade between 1995 and 2005 saw a wholesale transformation from non-networked desktop computers to networked laptops. We believe that the next decade will see the transformation from laptops to mobile devices with permanent high-speed cellular data connections. Modern mobile devices from Apple, Blackberry, Microsoft and Google are clearly aimed at mobile knowledge workers, and the clear goal is to provide ubiquitous access to content and community.

We have been working hard to support this increasingly important class of mobile user. It is a non-trivial challenge, since the mobility market is quite fragmented, no one platform has market leadership, and very few industry standards are in place. At the same time we know it is important to our customers that we provide flexibility and choice of mobile device just as we have with desktop operating system. This is critical in the mobile environment.

One key part of our approach is all about getting your key FirstClass data (messages, contacts, calendar events and tasks) into the device in a format that the device understands so that the device can display the data through the built-in applications of the device. This is generally referred to as "Syncing". For messaging data we support the key industry standards of IMAP and POP. We continue to test and enhance our support for these protocols with every major release. In FirstClass 9.0 we introduced FirstClass Synchronization Services (FCSS) to provide support for the industry-standard protocol called SyncML and many of our customers are now successfully using FCSS to support Palm/Treo, Blackberry and Windows Mobile devices.

Enhanced Sync Support for Mobile Devices: In FirstClass 10 we will greatly enhance our "Sync" support with the following new features:

- The FirstClass 10 version of FCSS will support Microsoft's **ActiveSync** protocol for the bi-directional syncing of contact, calendar event, and task data. This will provide a simpler, more cost-effective and more robust solution since ActiveSync is now natively supported by Windows Mobile, Palm/Treo, and the iPhone. There will no longer be a need to purchase and install a 3rd party sync translator on platforms that natively support ActiveSync. In addition, our ActiveSync implementation will include support for Directory Searching. This will enable devices that support Directory Searching to search the FirstClass directory directly from the handheld. Only directory entries that have valid résumé data will show up in the search, and the résumé data will be provided to the handheld as the user data (sometimes referred to as a virtual contact).
- Our recommended syncing solution for Blackberry continues to be the Nexthaus SyncML agent through SyncML via FCSS. We will continue to

work with Nexthaus and enhance our offering as they provide new enhancements in their offering. In addition we will be testing out Blackberry ActiveSync solutions that are starting to appear from 3rd party vendors. We will keep our user community advised regarding our findings. Also, RIM has announced on October 21st, 2008 that they will be exposing their APIs for their push technology to their 3rd party developer community. We are now investigating the feasibility of building a direct push solution from FCSS to Blackberry devices without the need for any intermediary software. We expect that such an approach will provide the fastest and most reliable solution over the long run.

- **FirstClass 10 will include the new FirstClass iSync Connector.** This software runs on Apple Mac personal computers and enables FirstClass users to quickly and easily configure it so that FirstClass contacts, calendar events, tasks, and bookmarks are synchronized via the iSync engine with other applications such as Address Book, iCal, and MobileMe and devices such as iPhones, iPods, and 3rd party devices that support iSync.

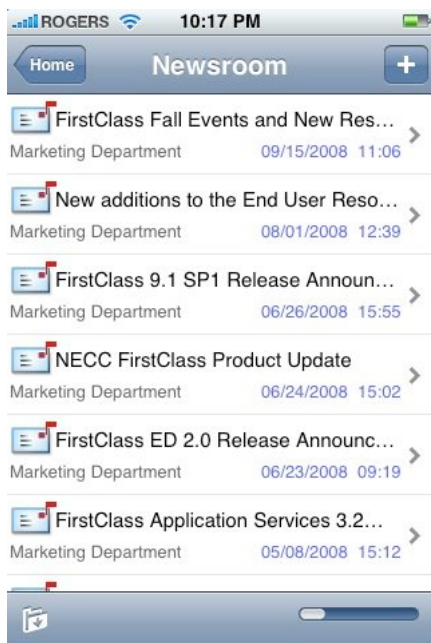
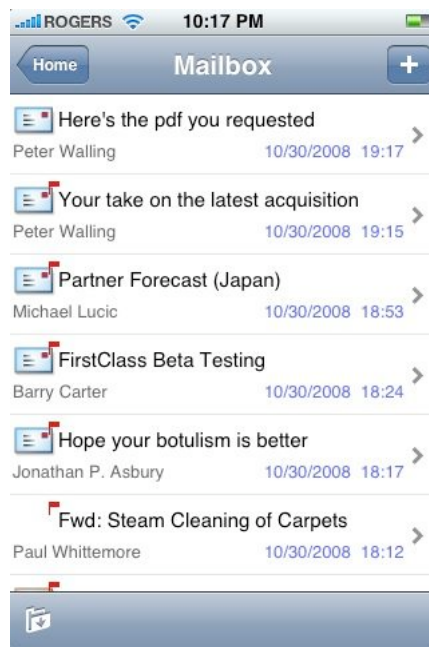
FirstClass Native Mobile Clients: The power of the latest generation of mobile devices and mobile development environments is at last sufficient to enable the delivery of a compelling mobile experience for FirstClass communications and collaboration features through native mobile applications. By building on top of the latest device-specific development frameworks we can provide a user experience that matches other device-specific applications. As well, we can exploit device-specific features by integrating them into FirstClass. For example, if the device has a camera, it would be useful to enable a direct upload of a photo of a person on the device into a FirstClass contact. We are now working on FirstClass Mobile Clients to deliver this. The first one of these to ship (as part of FirstClass 10) will be the **FirstClass Mobile Client for iPhone, providing real-time push delivery of mail, in addition to full access to social networking and other applications in the FirstClass suite, including FirstClass Forms, Workflow and Application Services.** We expect that the iPhone version will be followed by a FirstClass Mobile Client for Blackberry.

To provide a better illustration of the benefit of a native mobile client here are a few screen snaps of the current working version of the the FirstClass Mobile Client for the iPhone:

**Desktop
Files**

Mailbox

Conference





Search

FirstClass 10 will include a brand new high-performance relevancy ranked search engine built in to the FirstClass Core Server that will deliver many great features to FirstClass users including:

- **High Speed:** The new search engine will provide sub-second response times for most searches including large ones encompassing millions of containers and objects.
- **Permissions-based:** The search engine will provide full respect for FirstClass permissions and access controls. Users can only see search results for information they have permission to access.
- **Supports Attachments:** Text data from within a number of file/attachment types including PDF, Word, and text files will be included in the index.
- **Social Searching:** The search engine includes an innovative "social searching" relevancy ranking algorithm that returns ranked results categorized by content, people and conferences. This enables users to find not just content, but people and conferences that are associated with the query.
- **Instant Indexing:** All new content created/received within a FirstClass 10 system will be instantly indexed at the time it enters the system. It is then immediately available for all future searches. There is no need to wait for a scheduled "crawler" to index new content. Note that all existing FirstClass Network Store content will be indexed automatically via the FirstClass 10 upgrade process.
- **Index Preservation:** Building an index from scratch is supported, but for fast restart/recovery operations the search index data will be stored on disk resident data structures.
- **Multi-threaded Search Architecture:** The search engine in FirstClass 10 supports a multi-threaded architecture so that search and indexing operations can be carried out in parallel by separate processor cores on large multi-core systems with little impact on FirstClass Core Server performance.



Web 2.0 and Social Networking

As described in the Strategic Directions section above our key goals going forward include providing a complete state-of-the-art Web 2.0 user interface for FirstClass AND providing a leading edge Social Networking and Collaboration offering. We will phase in the delivery of the new web user interface by first delivering it with the new Social Networking features in FirstClass 10.0. We will deliver a Web 2.0 user interface to existing FirstClass features in a subsequent FirstClass 10 release.

The key aspects of the new Social Networking features include:

- **Communities:** These are shared spaces that provide support for Discussions, Wikis, and Files. Tagging, Versioning, and Watching (a request to be notified if the item is updated) can all be applied to items within a community.
- **People:** Each person has a profile for sharing a wide array of personal information (name, phone numbers, email address, skills, interests, etc.), a "twitter-like" status message and a blog to publish items of interest. People can be found by searching based on their skills, interests, and content contributions. Key thinkers and contributors can be followed to provide immediate notification of when they are online or have made new contributions.
- **Home:** The home provides a powerful "dashboard" into the social network by supplying a visual indicator of Communities being tracked, People being followed, and Watches that are pending. This enables users to effectively prioritize and navigate through the wide range of information available to them.

One key integration point between the FirstClass Client and the new web-based social networking features will be via a "Communities" button on the Navigation bar to get to the Home screen. Another will be provided by the ability to jump to a user's profile by simply right-clicking on their name and choosing "Open User Profile" just like you can choose "Open User Web Site" today.

A key aspect of the new Social Networking feature set is the ability to invite external people (parents, business consultants, service companies, etc.) in to specific community. This will be done in a transparent fashion so that users inside and outside the organization will be able to collaborate as peers. Since the Community feature set runs in a standard web browser there is no need for the external user to have the FirstClass client. The external user will receive their invitation via standard email, and they can access the indicated community by a supplied link in the email (for the richest experience) or simply receive notification of new content via email pushed to their own email account.

A Web Services module will be provided to support web-based integration with

other web applications. This module will be able to provide both an embeddable UI of key parts of the Social Networking application and access to related key data structures. Details of these interfaces will be released as they become available.

Below are some screen shots of the current version of the new web user interface as applied to the new social networking applications. Please note that the look and feel of the interface will continue to evolve as we continue to work on the applications and receive feedback via usability testing and beta trials.

User Profile and Blog - finding out about people in your organization

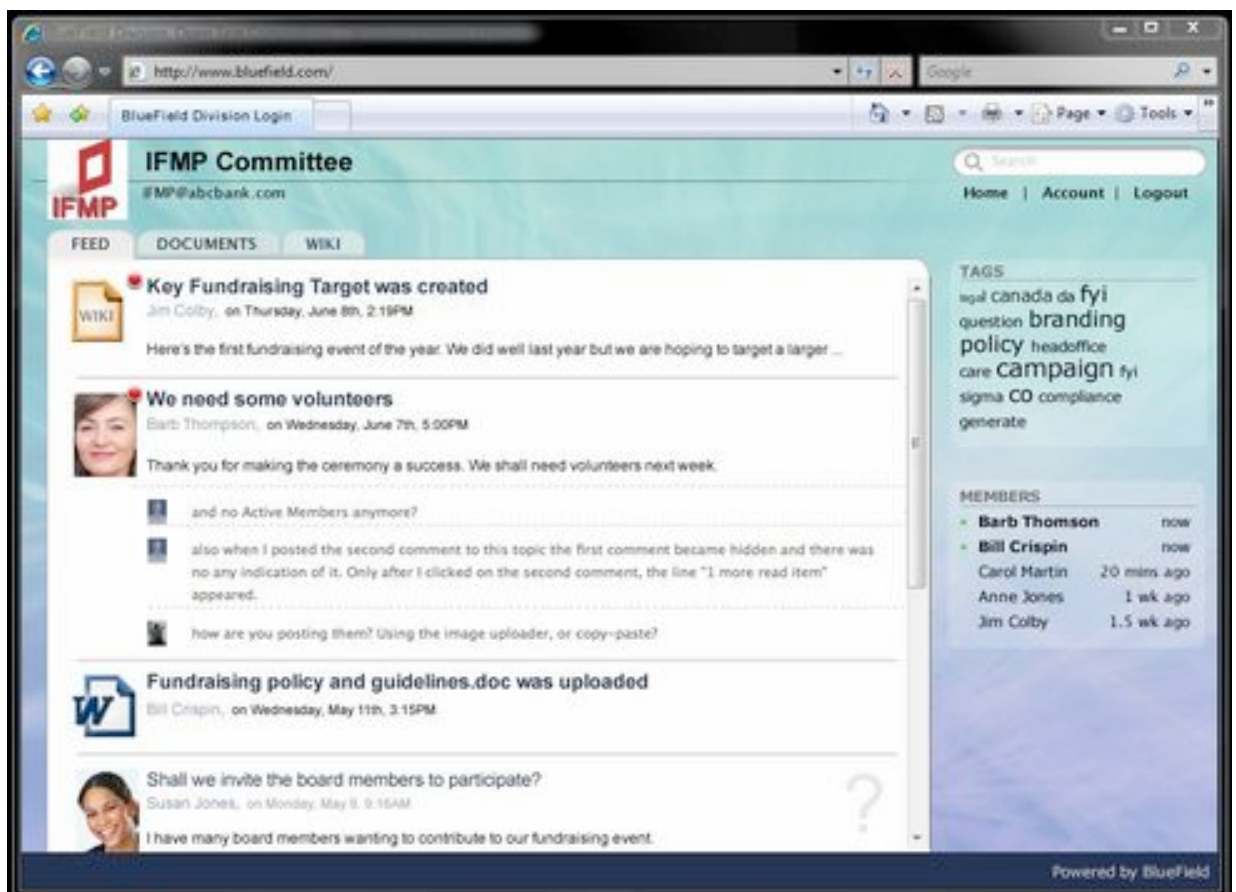


The screenshot shows a web browser window with the URL <http://www.bluefield.com/>. The page displays a user profile for Bill Crispin, Vice President of Marketing. The profile includes contact information (Phone: +1-416-277-8894, Mobile: 416-222-1234, Email: bill@abcbank.com, IM: bcrispy77@aim.com, SKYPE: scotwelch), a photo of Bill Crispin, and sections for INFO (Location: Richmond Hill, Ontario; Department: Marketing; Title: Vice-President of Marketing; Reports: Barb Thomson, Amos Weatherill, Colin de Bombaster; Last Login: Today 9 AM), BIOGRAPHY (I started life as a small boy, and only grew into the man you see today through sheer grit and determination. My love of all things Crispin-related grew from a deep sense of self-worth instilled in me by my manservant. Syrus, I now work as a VP of Marketing here at the bank, but in former times I have been both a lover, and a fighter, a rodeo clown, and a jukebox mechanic.), EXPERTISE (Design, Loyalty, Jingles), EDUCATION (MBA Harv and Business '78), LANGUAGES (English, French), and MY TAGS (do it superb, crispinomics, cool, loyalty, Canada). To the right of the profile is a blog section titled "BILL CRISPIN'S BLOG" with a post titled "Making Sense of the Perception of Security". The post text discusses the security trade-off and lists five areas where perception can diverge from reality: The severity of the risk, The probability of the risk, The magnitude of the costs, How effective the countermeasure is at mitigating the risk, and The trade-off itself. The post is dated "TODAY" and posted by Barb Thompson at 4:57 PM. The browser window also shows a search bar, navigation links (Home, Account, Logout), and an "Unsubscribe" button.

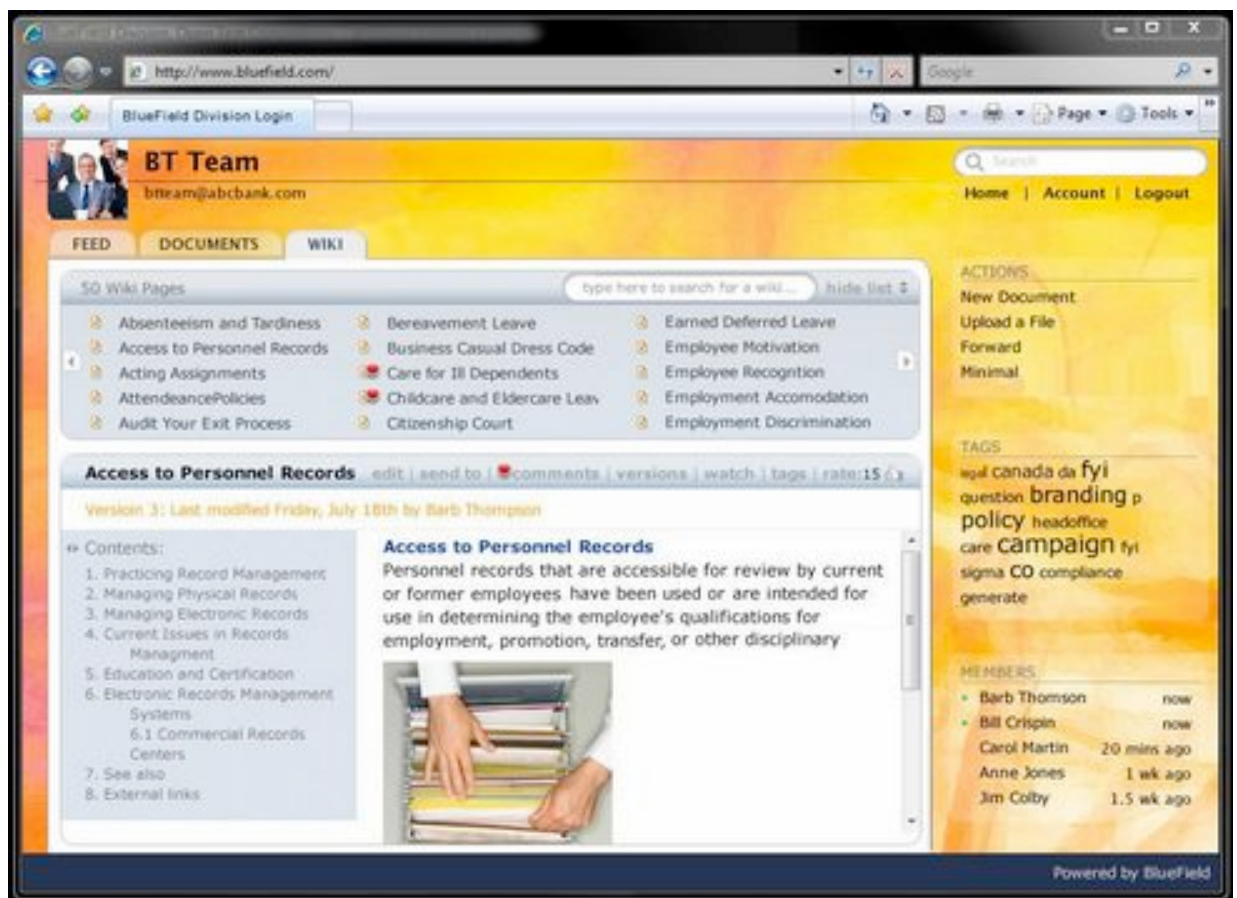
Advanced Document/File Sharing (with support for WebDAV)



Communities - flexible web-based discussions



Wikis - a great way to have a team publish the latest information





Calendar Enhancements

We have received many good suggestions regarding desired Calendar enhancements. We have done an extensive analysis of all the input we've received, and we've sorted all requests in order of importance and degree of difficulty. For FirstClass 10 we will be putting a significant focus on delivering enhancements in this area. We have a number of specific calendar items on our current working list, and once those are done we'll continue with the next set. Rest assured - calendar printing improvements is one of items on the list!



Enhanced Unread Item Tracking

The FirstClass Unread Item Tracking System has been significantly enhanced for FirstClass 10. The key new capability that it will now provide is the **count for the number of unread items in each container.** This new information will be displayed in our user interfaces such as the FirstClass Client and the FirstClass Mobile Client with a counter replacing the red flag on containers. The familiar red flags will still be used to provide the unread status for individual objects.



More Flexible Infrastructure Integration

We have always worked hard to make the task of managing a FirstClass system as streamlined as possible. Many of our customers are now taking advantage of the many features in FirstClass Directory Services to integrate FirstClass in with the meta-directories such as Microsoft's Active Directory or other LDAP directories. In FirstClass 10, Directory Services will be enhanced to support full synchronization of user groups and mail lists. This will provide more flexibility and less management overhead for organizations that are using their meta-directories to help manage groups of users.



Internet Services Enhancements

As mentioned earlier FirstClass 10 will provide a 64-bit version of Internet Services (IS). This new version will have access to more memory, and will deliver higher performance and higher concurrency. It will also be multi-processor aware to help deliver better performance on multi-core servers.



A key new feature for IS is **support for WebDAV**. This will enable containers that are configured for WebDAV access to be accessible from WebDAV clients including recent versions of Microsoft Office.

FirstClass 10 will also provide the "official" delivery of SMTP Submission Port support which will enable POP/IMAP clients to submit messages via SMTP.



FirstClass Application Services (FCAS)

Enhancements

Usage of FCAS as a way to customize, extend, and integrate FirstClass with other systems continues to grow. In FirstClass 10, FCAS will be extended significantly to enable an even wider range of solutions to be built using it. A 64-bit version will be provided, and it is expected that an order of magnitude improvement in code execution speed will be seen. Support for Helper applications will be provided, and they can be launched from the FirstClass rule system.

This new version of FCAS will provide access to directory objects within the FirstClass directory. Applications will have the ability to create, modify and delete user accounts without requiring FirstClass Scripting. In addition applications can search and list the directory, and even access dynamic directory-related information such as presence.

It will also provide programmatic access to a range of server control functions such as broadcast, audit, enable/disable logins, pause/resume mirror, and shutdown.

A range of other functional extensions will be provided as well.



Voice Services Support for Dialogic Media Gateways

Recent versions of Voice Services (VS) provide direct support for VoIP (Voice over Internet Protocol), facilitating direct connections to IP PBXs and VoIP endpoints using SIP (Session Initiation Protocol). Integration with legacy circuit switched PBXs was retained by the ongoing support of the Dialogic line of DSE (digital set emulation) hardware cards. This approach has worked well, but there is some complexity in having to find appropriate server PCs with sufficient PCI slots of sufficient size for the Dialogic hardware cards and installing the cards.

In FirstClass 10 Voice Services will provide support for Dialogic Media Gateways (DMG). The DMG is a standalone unit that provides a bridge between the modern VoIP/SIP world and the legacy proprietary circuit-switched PBX world. Customers deploying DMGs with FirstClass Voice Services will have an easier upgrade path when they eventually transition their PBX infrastructure to a native VoIP offering. The current approach and new approach are illustrated in the following diagrams:

Figure 1. Eight Port Legacy PBX Integration using Dialogic Hardware Cards

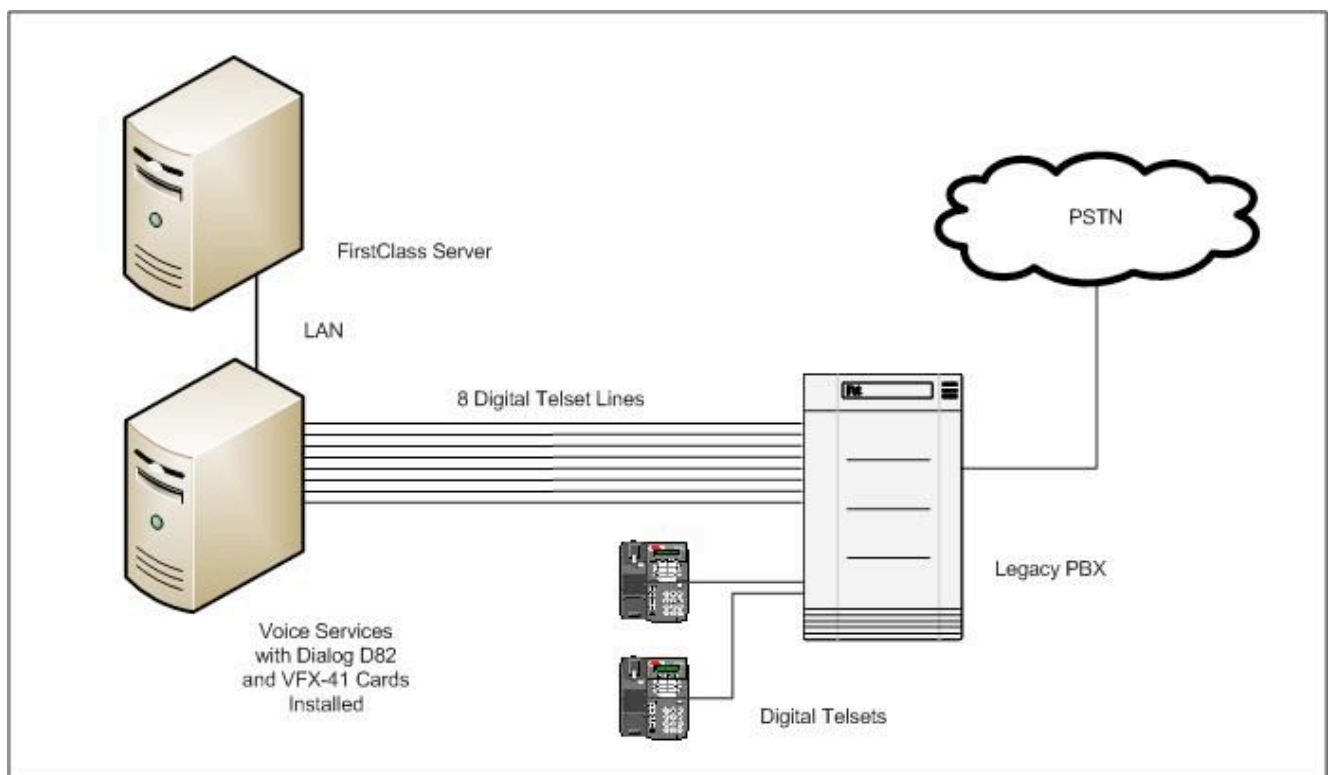
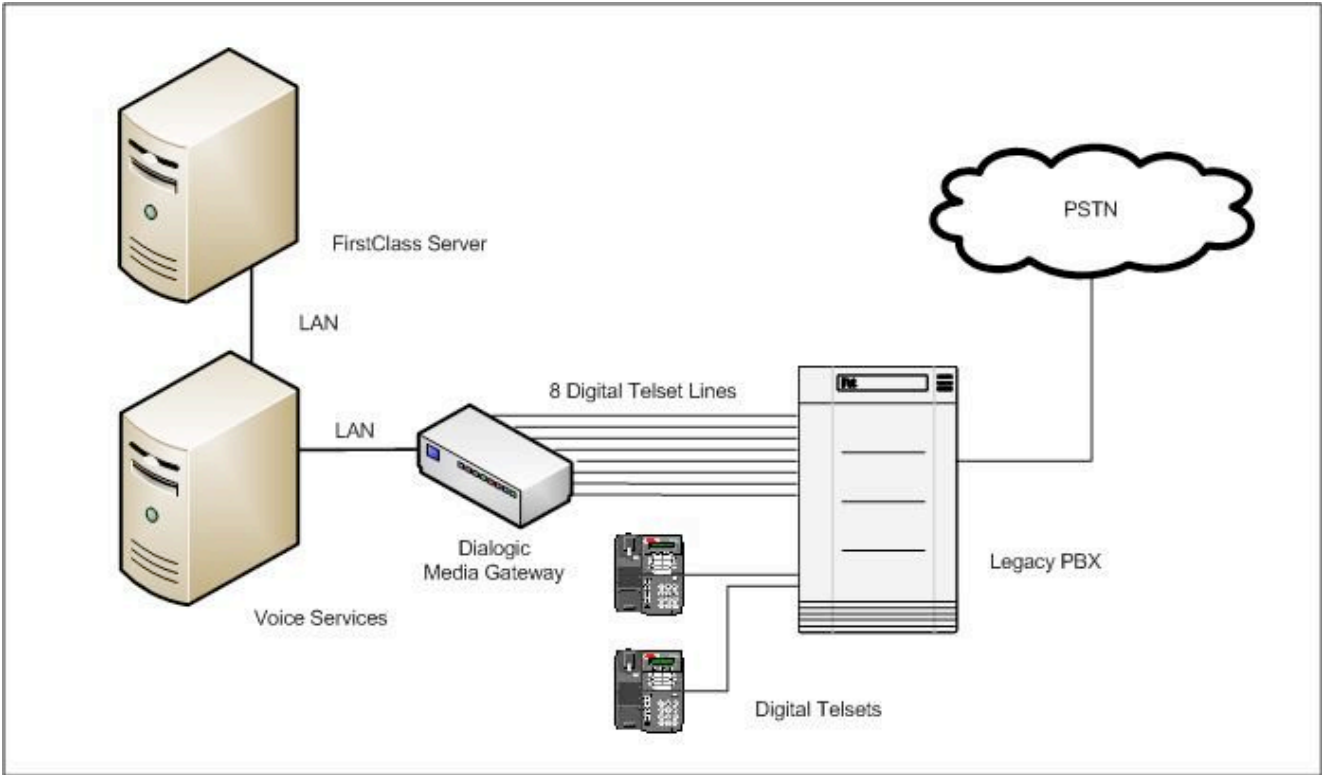


Figure 2. Eight Port Legacy PBX Integration using Dialogic Media Gateways





Delivery Plan

Many of our customers around the world have indicated that May is the best month of the year to receive a major software release since that gives them a bit of time to try out the new software in a non-production environment, and then schedule the upgrade to their production system some time in the summer months when things are not as busy. Accordingly **the target for the release of FirstClass 10.0 is May, 2009.** All of the above functionality is targeted for the 10.0 release.

FirstClass 10.1 will follow along approximately six months later. Key content in FirstClass 10.1 will include the extension of the new Web 2.0 user interface to core FirstClass functions such as mail, contacts, and calendaring along with a number of extensions to the new social networking feature set.

A FirstClass 10 server license will be required in order to upgrade. This license will be free for customers with valid Maintenance and Support contracts.