

White Paper

The Business Internet File ServiceSM

“Fundamentally, Mangomind ‘Internet-enables’ Microsoft applications, allowing users on the Windows PC platform to securely and effectively share files and collaborate outside the corporate firewall across any distance at any time.”

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New Challenges in Business Communications

Communications and sharing of critical information between members of extended business workgroups has always been a significant challenge. It has become even more difficult in today's world, where businesses have become much more mobile and dynamic and reliant on remote connectivity, partnering, outsourcing and collaborative commerce.

For example, consultants share documents with clients; financial companies create private placement funding documents to share with companies and attorneys; a traveling; worldwide sales force shares sales proposals; healthcare companies transfer patient records. Even within a single company, there are telecommuters, road warriors and multiple corporate locations worldwide that need to share the same up-to-date information.

Today's PC, networks and the Internet have enabled large amounts of information to be sent and shared electronically. Much of this information is confidential and critical to the businesses that use it. The challenge, then, is how to share data efficiently, while protecting the confidentiality of that data. To address this challenge, many business people find the tools that are available today inadequate for the following reasons:

- ?? **Virtual Private Networks** – Virtual Private Networks provide businesses a measure of security for sharing files. However, these networks are complex and expensive and place a burden on IT to configure and maintain additional hardware. When people need to share files quickly, they don't necessarily have the time and resources available to set up and wait for a VPN.
- ?? **E-mail** – Sending attachments over e-mail is quick and easy. However, difficulties arise when many people are sent the same file, change it and reply; nobody has a current version of the document. Sharing files via e-mail becomes increasingly difficult with larger files and a larger number of people. In addition, e-mail is insecure. Anyone tapping into the network with simple equipment can capture a company's confidential information.
- ?? **Internet storage systems** – Numerous products are available that provide storage services on the Internet. Most are free services aimed at consumers. Internet storage allows single users to store data accessible to any system with a browser. Many people use these services to share data for access from their home and office. A single user must manually make a local copy of the data, work on it and then publish it back to the storage site. Sharing is typically out of band, meaning that users must take action to coordinate their changes separately from the application. Solutions that are best for single users to archive large amounts of non-confidential data do not provide adequate security and are inadequate for sharing and storing mission-critical information.
- ?? **On-line collaboration** – Several proprietary Internet collaboration services have emerged. While some of these offer an element of file sharing similar to the Internet File Storage systems, the overall services are expensive, complex and are only available to those who purchase the application.

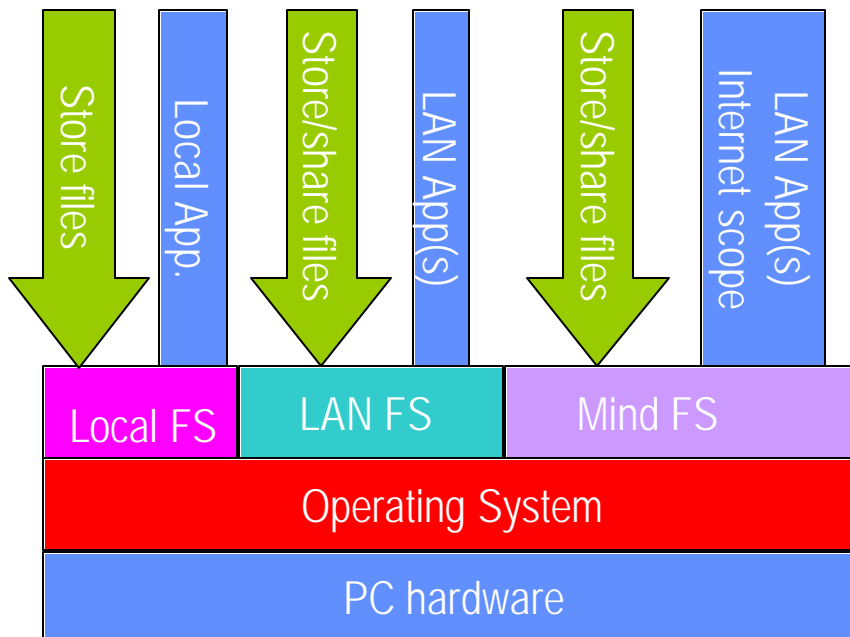


Evolution of File Sharing

Historically, PCs have been islands of computing, where applications operate on local data stored on the PC's hard drive. Local Area Networks (LANs) introduced significant advances in efficiency over this model where data could be easily shared within a company. This was similar to the efficiencies gained by the introduction of e-mail within a company.

In the current Internet era, global, inter-company information sharing has opened a much greater opportunity for business to gain incredible benefits. The Internet dramatically extended the range and utility of e-mail: the Internet's first "killer application". The next logical step is to extend the range of LAN-like file sharing to the Internet, dramatically improving its usefulness to the business user.

Mangomind is a unique service that extends the reach of LAN-like file sharing to the Internet, facilitating the secure and efficient operation of inter-company workgroups.





Mangomind – The Business Internet File Service

The Mangomind service from Mangosoft combines the familiarity of Windows applications with the power of the Internet to deliver a secure, easy way for multiple users to share and store important business files. Mangomind is an innovative solution that overcomes the challenges inherent in today's solutions, utilizing the applications and tools people already know how to use to expand the way businesses efficiently and securely share data.

Mangomind Benefits

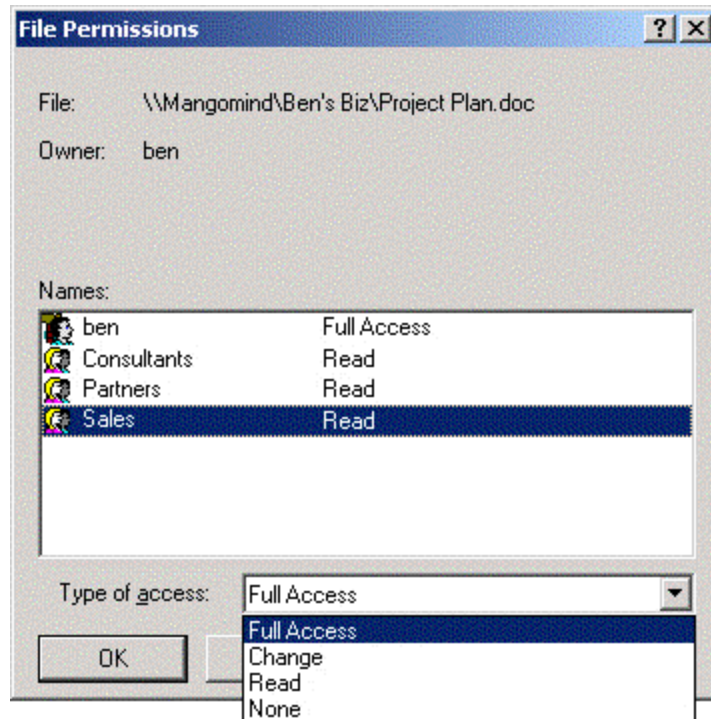
Simultaneous, Multi-user Access

Mangomind is a true Windows file system based on Mangosoft's patented peer-to-peer pooling technology. It is the only Internet file sharing service that allows multiple authorized users at any location to simultaneously access and share files. Each authorized user has access to the latest copy of the file stored at a secure location. Most Windows applications work natively over the Internet with Mangomind, the same way they work over a LAN. Mangomind properly arbitrates between readers and writers of files, ensuring your files are up to date and changes are never lost. And unlike e-mail and Internet storage services, applications operate directly on the files, without any additional copies being made. In addition, users can create an identity profile for a drive, giving them access to a single Mangomind drive from multiple computers.

Robust, Safe and Secure

Mangomind allows users to set access permissions for files and folders on a Mangomind drive. End-to-end data encryption ensures that all files are securely transmitted and stored.

Mangomind offers complete file-level and directory-level permission settings for both individual users and groups of users. This lets users specify access privileges to allow or deny other Mangomind drive users access to specific files. For example, you may have a document that you want to be able to both read and change, but ensure it is read-only for all others. Using the Mangomind permissions, you can easily configure this type of access to the file.



Mangomind possesses a client-side state-of-the-art 128-bit encryption scheme from RSA Security, Inc. that meets mission critical business requirements for data confidentiality. Some Internet file-sharing systems protect your files from other users, but do not protect them from being viewed at the host site where the server is located or during transmission. With Mangomind, data is encrypted on your PC before transfer and storage, so even people managing the Mangomind service cannot access the information you store on Mangomind drives. Service Level Agreements ensure daily backup and restore, mission-critical availability, and 24x7 support to protect valuable business files.

Because data is backed up daily at the Mangomind drive host site, data is protected against PC or disk failure and can be recovered if accidentally deleted. This backup process is part of the Mangomind Service, giving you peace of mind and freeing you from the need to back your own data.

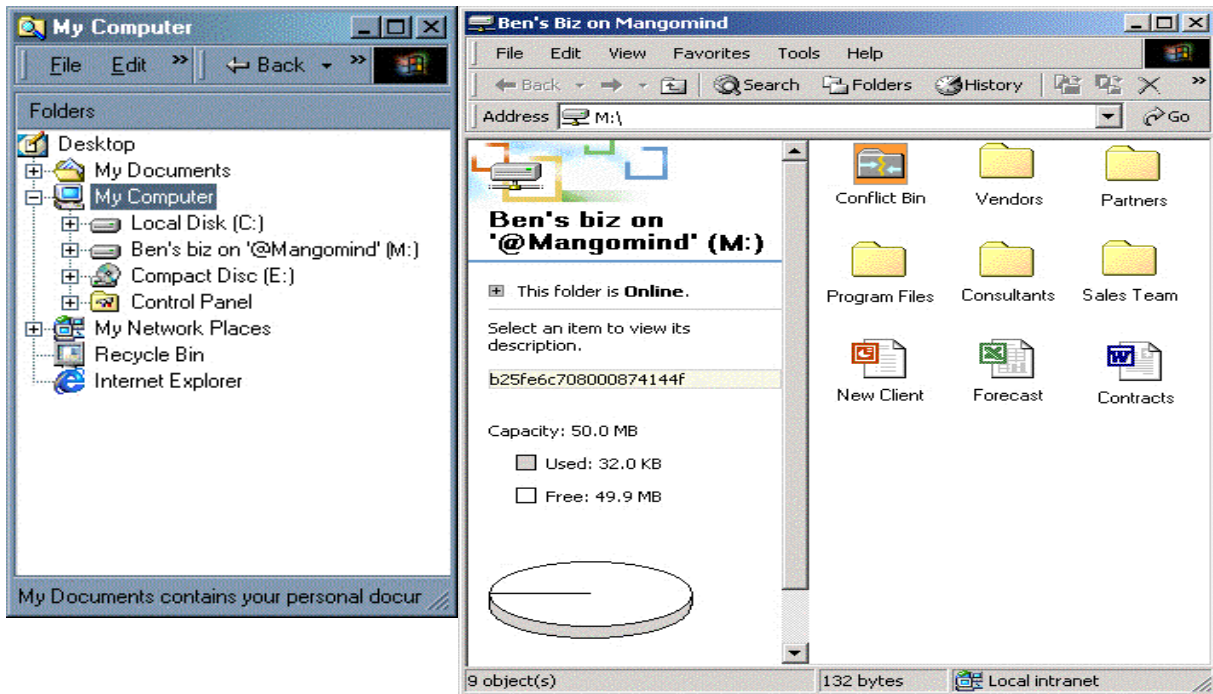
The Mangomind service is hosted and managed by Tier 1 service providers ensuring high reliability and availability.

Familiar Windows Interface

Mangomind drives look and operate just like users' local drives and are completely integrated into Windows. They use the same Windows interfaces that people already know how to work with so no training is required. Applications automatically work with Mangomind as if they were on a LAN-based shared drive so no system changes are required. Drives can be accessed from My Computer, Windows Explorer, Windows Applications and from the Mangomind drive bar.



Applications that work with a local drive or on a shared LAN drive will work seamlessly with Mangomind drives. For example, many LAN-based groupware tools have a wider scope being able to work over the Internet with Mangomind. Permissions are set up exactly as they are in Windows.



Access anytime, even when offline

Mangomind files are always available to drive users. Even when disconnected from the Internet, users can continue to work on their files offline. Mangomind automatically synchronizes the files when the user reconnects to the Internet.

When you open a file on a Mangomind drive, the file is copied to your system and cached (stored) there. When working offline, these locally stored files continue to be available to you. You can work with cached files and even create or delete files locally while you are not connected to the Internet. All of your local changes are tracked so that when you reconnect to the Internet, your new or modified files are transferred automatically to the server for other users to access.

If the Mangomind server detects that two users have modified the same file, the file is placed in a virtual "conflict bin" and the users that have made conflicting changes are informed and can use tools within their applications to resolve the conflict. No changes are lost.

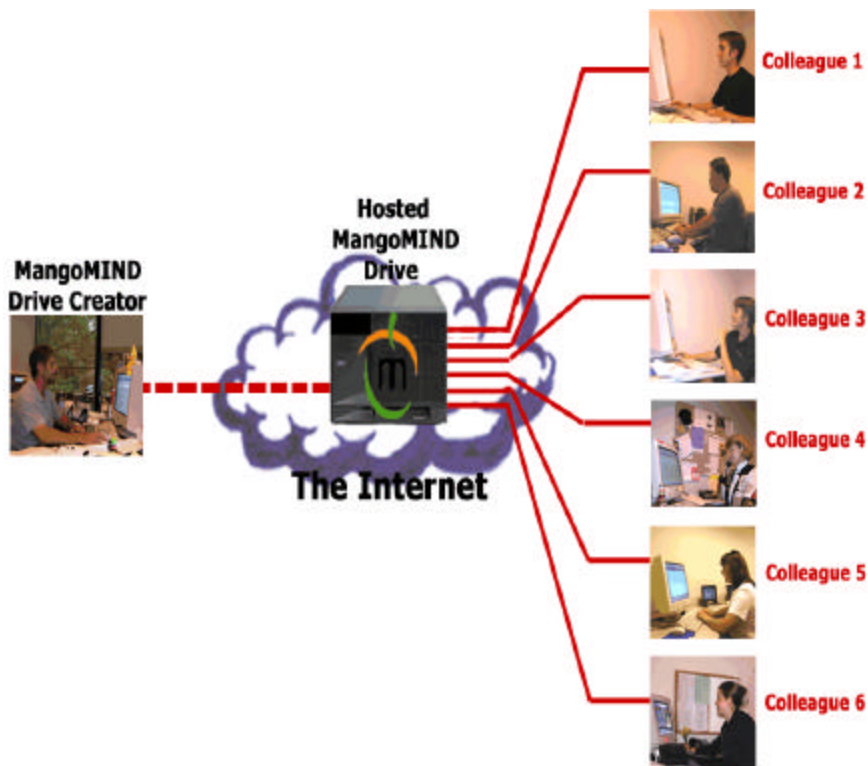
Running Applications with Mangomind Drives

Mangomind is a Win32 file system operating over the Internet. Its functionality is programmatically accessible through the Windows file system APIs. Mangomind supports a complete set of file system operations including: directory creation, deletion, rename and enumeration; file creation, deletion, reading, writing and so forth. These functions can be executed directly or indirectly through operating system services and DLLs.



How Mangomind Works

The first person to join a Mangomind drive invites other users to join the drive and sets access permissions for files and folders. Invited users then link to the Mangosoft Web page, where they download client software and install it on their PC. Invited Mangomind drive users who join the drive can then access and share files on the drive. Once people have joined your drive, they can all create, read, modify and delete files there. Everyone has access to this drive you share and the information on it. Information is kept up to date and each user's latest changes are available to other users.





Summary

Mangomind, The Business Internet File Service, provides an innovative solution to easily and securely share files between business users. Mangomind overcomes the security and efficiency limitations of today's tools.

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