

Address Book Synchronization in MDAemon 6.5 using ComAgent, XML, MAPI and WAB

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Abstract

Deploying a common address book for all users within an email domain provides the advantage of consistent information and the efficiency of centralized maintenance. Together these create the potential for more consistent address information throughout an enterprise.

Application-specific directories currently provide address book services for specific email servers and clients. While these proprietary tools meet the needs of their native applications — and sometimes offer global access — they often work against the sharing of information with other software packages.

For directory services, MDaemon offers the option of using industry-standard XML technology for global address books. This XML directory, designed to use with MDaemon's WorldClient web email service, maintains global address books for both public and private addresses.

By using MDaemon's free ComAgent tool, each user can synchronize their personal contact information between their Outlook (MAPI) or Outlook Express (WAB) address book and the XML address book. This means the contact information for their Windows-based email client and the web-based WorldClient are the same.

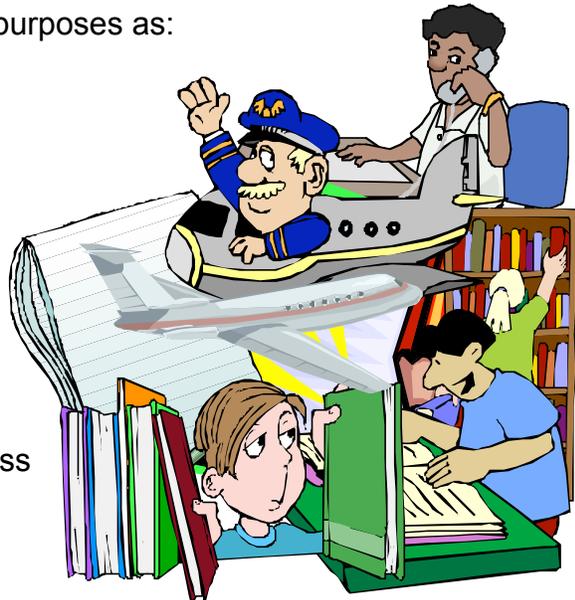
Everyday Directories

Almost everyone makes daily use of directories. A directory can be as complex as the card catalog in a library or as simple as a list of names and phone numbers taped to a wall. In general, directories organize and describe people, places, things and ideas.

People use directories for such diverse purposes as:

- locating products and services
- finding phone numbers
- checking flight schedules
- searching for magazine articles
- finding people of like interests
- keeping track of CD's in a collection
- listing occupants in a building
- keeping a list of personal and business contacts

Until recently most directories were printed, partially out-of-date and time-consuming to update.



Electronic Directories

Global Use

Popular use of electronic directories by the general public is just now taking place, mostly because of the Internet. People are starting to trade in printed telephone books, schedules and catalogs for their online equivalents.

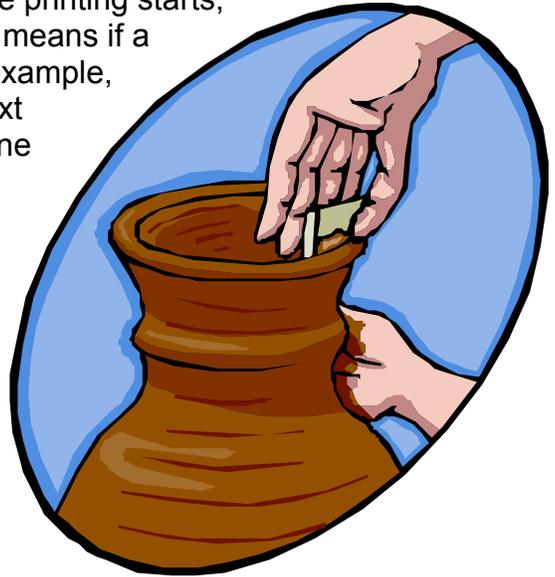
There are useful reasons for this trend. When properly designed, online directories can potentially make information:

- Dynamic
- Flexible
- Personalized

Dynamic

Information in a printed directory is static. Once the printing starts, changes are difficult and expensive to make. This means if a price or schedule or phone number changes, for example, the directory information is out-of-date until the next printing. Consider the true story of a large telephone company omitting the local school district from the printed phone book. It took a year before the correction appeared in the next edition.

Online directories can improve on this. If data changes for a product, service, schedule or phone book, the online directory can show these updates immediately. Mistakes can be corrected when discovered. In practice this does not always happen. It normally occurs at the discretion of the directory administrator, but the potential for quick dynamic updates is available.

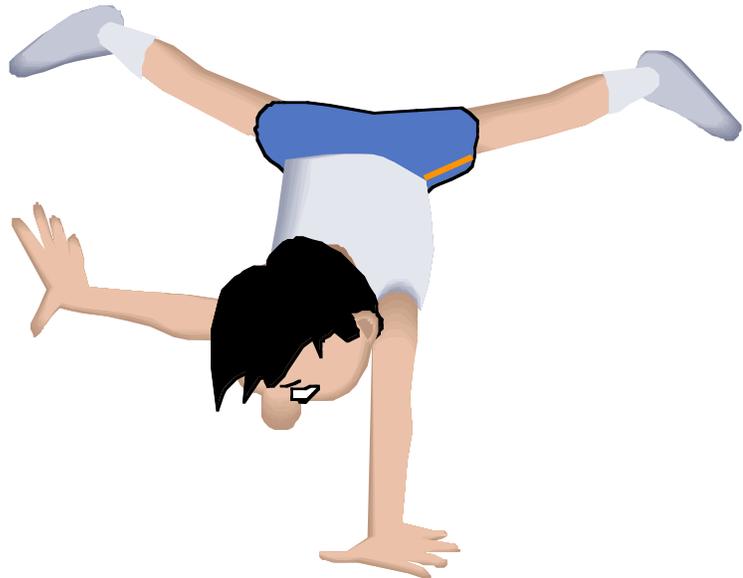


Flexible

Printed directories typically contain one type of information and a single method of organization. A phone book, for instance, lists businesses, organizations and individuals in alphabetical order. Each listing includes just a name, address and phone number.

When provided online, a directory can maintain extended information. An online phone book, for instance, might also contain birthdays, anniversaries, family member names,

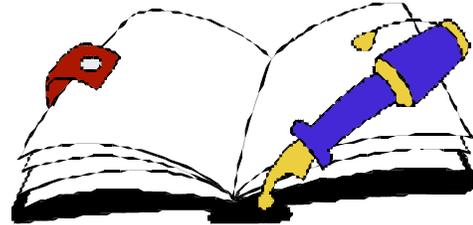
transportation preferences and favorite pizza toppings. The content is limited only by privacy and security concerns. The information can also be organized in multiple ways simultaneously. Searches could be by name, address, zip code, pizza toppings, country or whatever.



Personalized

Many directories in print contain much more information than a typical user needs. A city phone book holds thousands of numbers extraneous to the requirements of a typical user. To make frequently called numbers easier to find, a user might make a list and tack it to the wall. In the case of a large catalog, customers have been known to rip out pages of interest and trash the rest.

Online directories make personalization a reality. Using preferences or queries, users can quickly find just the information they need. In addition, an online directory can contain more types of information. For example, a personalized electronic address book might include birthday and family information in addition to names, addresses and phone numbers.



Email Address Book Directories

Address book directories can be application-specific or open to other directory-enabled application.

Application-specific directories include:

- Lotus Notes Address Book
- Novell GroupWise Directory
- Microsoft Exchange Directory
- Windows Address Book

These directories are proprietary. The main goal of proprietary directories is supporting their specific applications. Extending these directories to work with other applications is awkward at best.

In contrast to this, many directory-enabled applications are beginning to use XML for data exchange. Because it uses an open standard, XML data can be more easily shared among other applications.

MDaemon uses XML data structures as core of its address book synchronization technology.

What is XML?

XML is an open, industry-standard markup language for describing and structuring sets of data for specific applications. For an address book directory, XML might define and structure such data as user name, email address, home address and home phone to name a few. Every piece of data is wrapped in tags, such as:

```
<fullName>Frodo Baggins</fullName>
```

The structure shows how pieces of data relate to each other. For example, a small address book might contain entries for two contacts:

```
<?xml version="1.0"?>
<addressBook>
  <contact>
    <guid>3713ae40f6f711d6ab7e0040053dc0f8</guid>
    <email>frodo@hobbiton.shacknet.nu</email>
    <fullName>Frodo Baggins</fullName>
    <homeAddress>Bag End</homeAddress>
    <homeCity>Hobbiton</homeCity>
    <homeState>The Shire</homeState>
  </contact>
  <contact>
    <guid>3713ae44f6f711d6ab7e0040053dc0f8</guid>
    <email>tgaffer@hobbiton.shacknet.nu</email>
    <fullName>The Gaffer</fullName>
    <homeAddress>Bagshot Row</homeAddress>
    <homeCity>Hobbiton</homeCity>
    <homeState>The Shire</homeState>
  </contact>
</addressBook>
```

The address book begins and ends with `<addressbook>` and `</addressbook>` tags, respectively. Each contact also has beginning and ending tags: `<contact>` and `</contact>`. And the data within each contact also has tags defining the content and the structure.

XML application programs take care of the tags and structures.

While there is a little more to XML than this, any XML-aware application can read this data and make sense of it.

Because of its simplicity and openness, XML is a good choice for applications such address book synchronization.

Synchronization Concepts

Important: MDAemon's XML address book files can be directly opened with a web browser or text editor. However, they should never be edited with these applications, as this can damage the files. Please edit the files only with MDAemon, WorldClient, the ComAgent synchronization function or an external program designed to work with the MDAemon XML files.

Synchronization happens between the XML files and the client address books as shown in the illustration.

MDAemon stores all of its address books in XML format.

The XML files provide public and private address book storage for the email client built into the WorldClient web application.

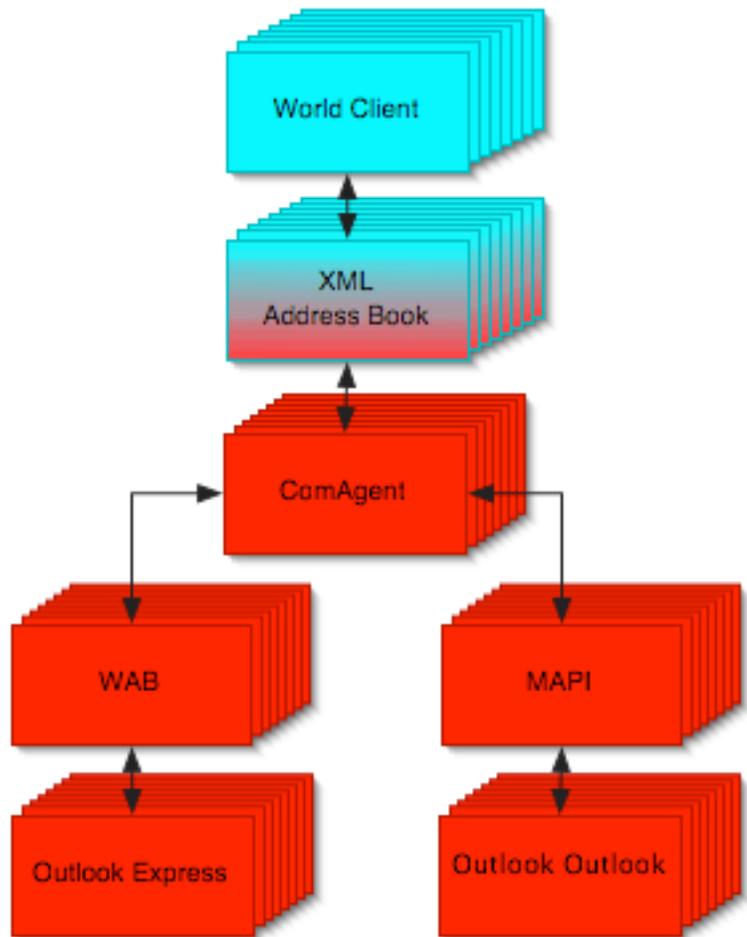
MDAemon can store public addresses for:

- all domains in one address book.
- some domains in one main address book and others in separate address books.
- all domains in separate address books.

When users add private addresses through WorldClient, MDAemon keeps these in separate XML files for each user.

XML storage extends address book access to other XML-aware applications, such as ComAgent.

When the XML files are coupled with ComAgent, the address books can be synchronized with the client address book for Outlook Exchange (MAPI) or Outlook Express (Windows Address Book or WAB).



Configuring And Synchronizing Address Books

Configuring and synchronizing the address books requires setting up software and options on the email server and client computers. Once configured for synchronization, MDAemon automatically maintains the XML address book for public addresses. Other public and personal address book maintenance can be performed through the WorldClient web application, plus Outlook, Outlook Express or any XML-enabled address book software.

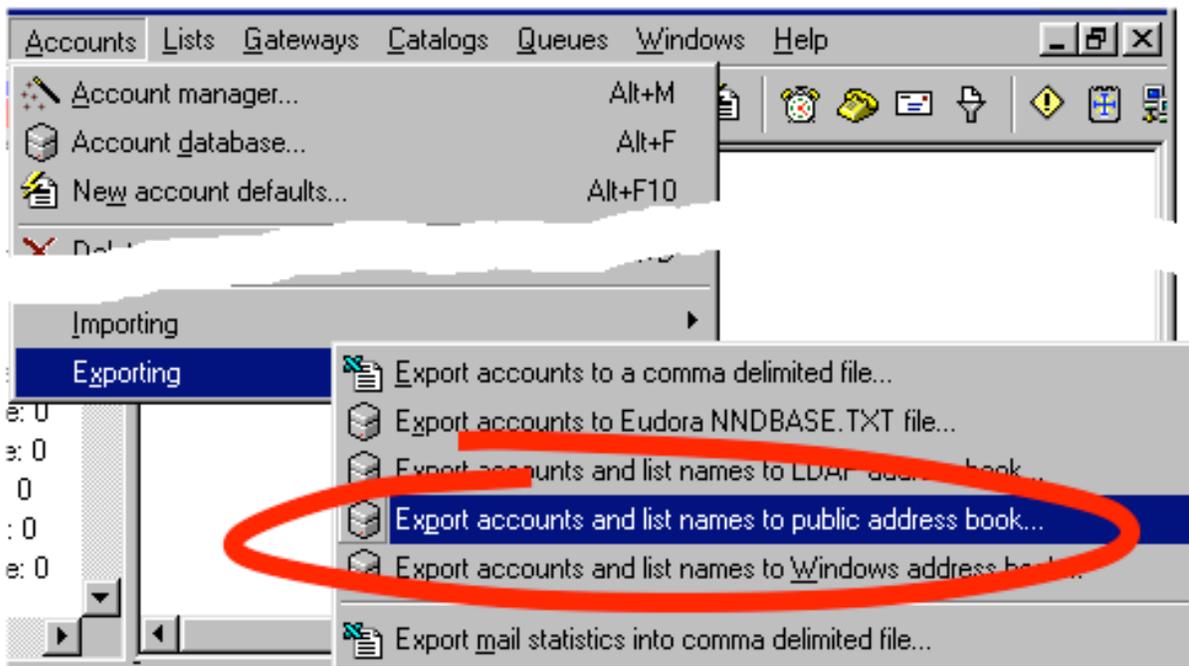
In summary, configuring and synchronizing the address book requires these steps:

- Export the addresses to the XML address book one time.
- Give individual user accounts the ability to edit public addresses or private addresses or both.
- Install ComAgent on the client machines.
- Configure ComAgent to synchronize the XML files with either Outlook or Outlook Express.

Server Setup

Export Addresses One Time

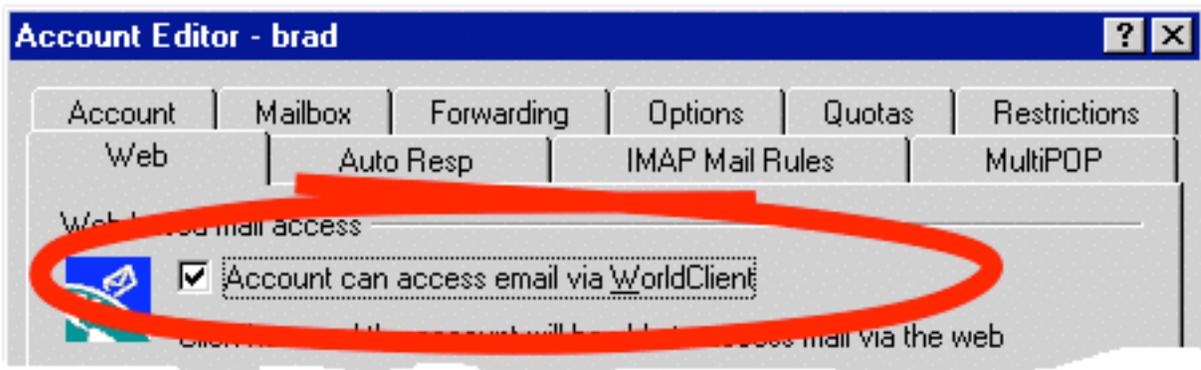
Automatic exporting of some MDAemon account information to public address books begins by using the **Export accounts and list names to public address book** command from the **Account** menu. After using this command, MDAemon mirrors changes to the XML files.



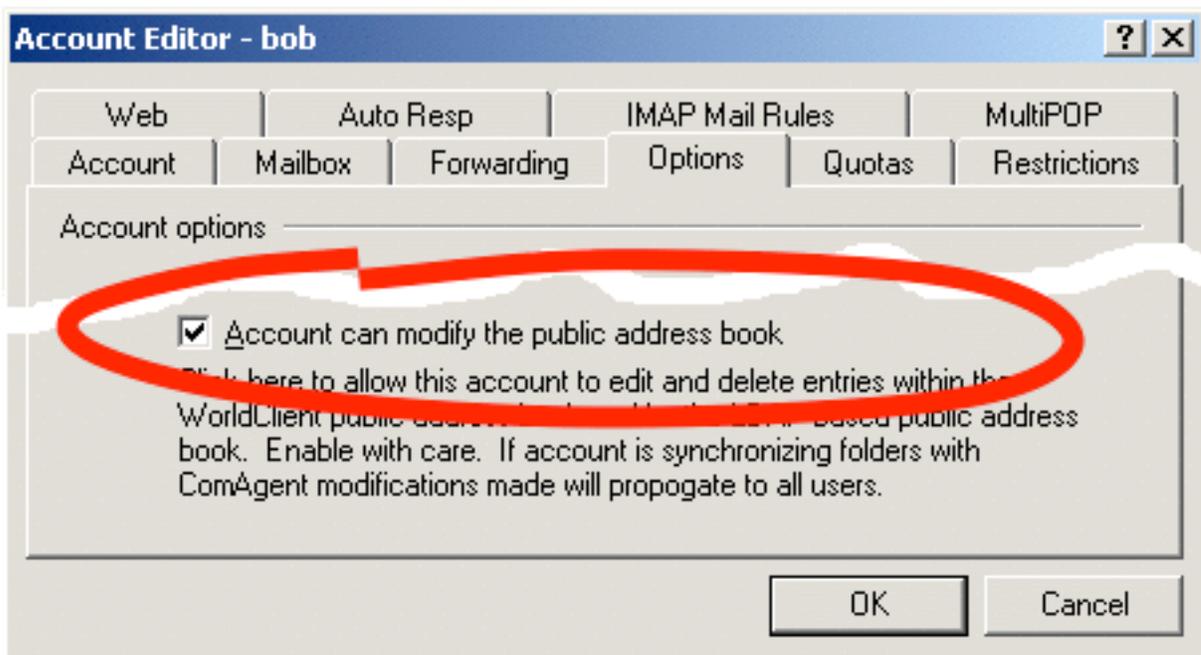
Configure User Account

Two settings on the server can supply flexible email capabilities to account holders wanting to use web mail. Both settings are available through the **Accounts Edit Account** command. One is essential, the other is optional.

The essential setting gives the account holder the ability to use the WorldClient email application. WorldClient is one way to add, change and delete address book entries in the XML address books. Addresses can also be maintained using Outlook, Outlook Express or any XML-aware address book application. This setting is on the **Web** tab of **Account Editor** dialog.



The optional setting is on the **Options** tab of the **Account Editor**. It enables the account to update the public address book. While MDAemon manages the MDAemon-specific data for the public address book, other personal and business information can be maintained by other XML-aware applications. It might be a good business practice to limit the number of people who can update the public information.



Note: System administrators can give account holders the ability to change their own account information through the WebAdmin application. This is unrelated to XML and address book synchronization. However giving each user the ability to maintain personal data might keep the information more current than if the administrator was doing all updates.

Client Setup

ComAgent Installation

Alt-N's ComAgent does the work of synchronizing the XML address books with the local address books. This software runs as a taskbar communications utility on Windows Client systems. A Java version of ComAgent meant for other operating systems does not include the address book synchronization function.

ComAgent synchronizes the XML data with the Outlook or Outlook Express address book on the local client machine. It updates one address book or the other, not both.

ComAgent is a self-configuring download. It comes from the account holder's email server already configured for the user. It is not available from the Alt-N web site. The account holder downloads ComAgent from the Options area of WorldClient.

Installation is similar to any other small program, with the user double-clicking the installer and choosing an installation directory.

Beyond address book synchronization, ComAgent automatically logs in a user to the WorldClient application. It also tracks when mail arrives and simplifies the creating, sending and viewing of messages through WorldClient.

ComAgent includes a built-in instant messaging client.

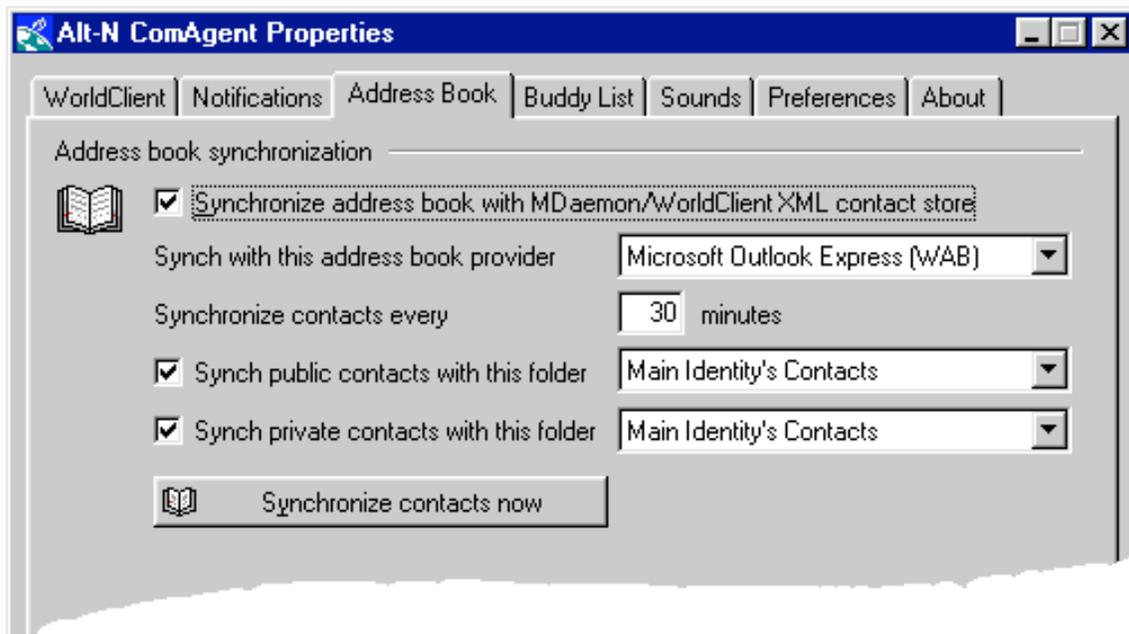
After the agent is installed it starts up with the user ID already entered. The user supplies a password.

ComAgent Synchronization Configuration

Synchronization involves deciding what to synchronize and then doing it.

As mentioned earlier, ComAgent synchronizes XML address book with the Outlook or Outlook Express address book, but not both.

To configure synchronization, the user right-clicks the ComAgent in the task bar. When the menu appears, selecting Properties displays a dialog for entering preferences.



The dialog contains multiple tabs. The Address Book Tab has controls for:

- Enabling synchronization.
- Selecting an address book for synchronizing, either the Outlook MAPI directory or the Outlook Express Windows Address Book.
- Identifying the Outlook or Outlook Express address book folders for public and private addresses. These must be separate from each other and already set up. ComAgent can not create these folders. Setting up these folders is a function of the email client.
- Synchronizing the address books immediately.

Conclusion

Address book synchronization provides interoperability otherwise lacking in the proprietary email clients developed by Microsoft. By synchronizing data between XML address books and these proprietary clients, ComAgent expands the opportunities for deploying MDAemon in environments where users prefer their familiar email client programs, but also want to use web mail. Because XML is a industry standard, the address books can also be accessible by other XML-aware applications.