

Delphi & ADO & MAPI Together

Address Book Provider

Knowing both ADO and Extended MAPI very well one may develop one's own design of MAPI Service Provider that would unify them. We started off with the easiest to implement but also most commonly used Service Provider – Address Book.

We did our best to make our Address Book work on all Outlook versions since 1996–starting with Windows Messaging and covering the last version. The code also can be compiled with minimal changes by Delphi 5 to Delphi 2005.

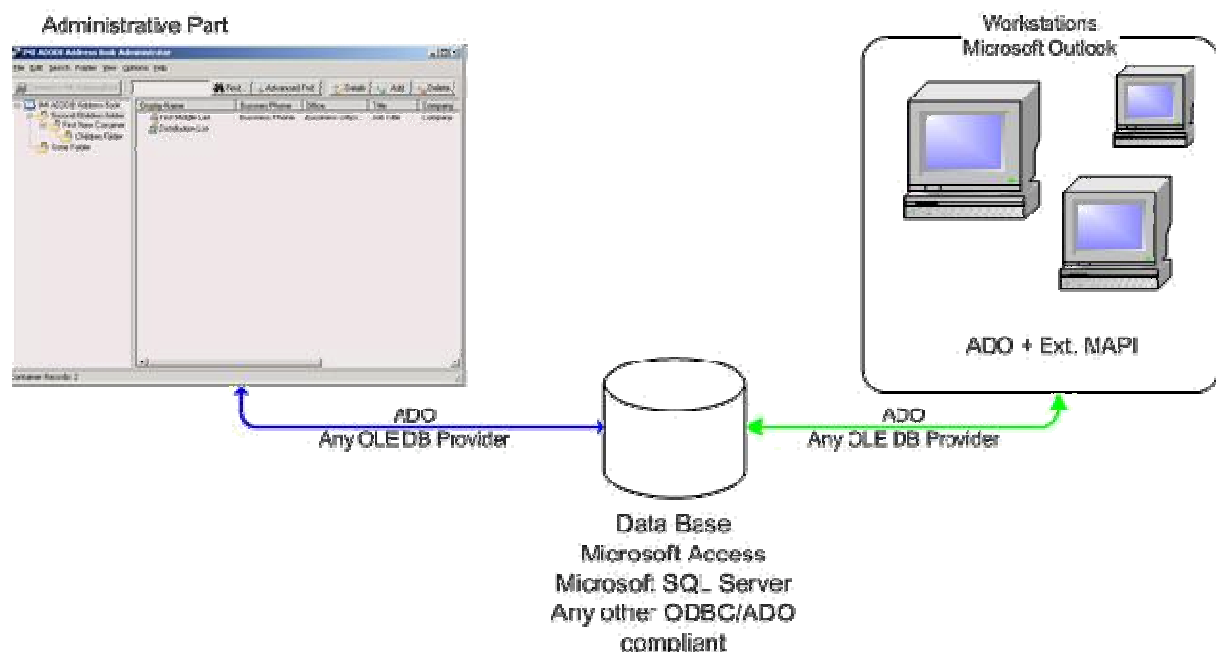
In addition we wanted the information provided by our Address Book to be used not only in Outlook but also in the form of a desktop application.

For the basic design we chose Microsoft Access as a storage that will use our data, because it is very popular and because every Windows version after NT4 is capable of processing the queries to it without having to install any additional software.

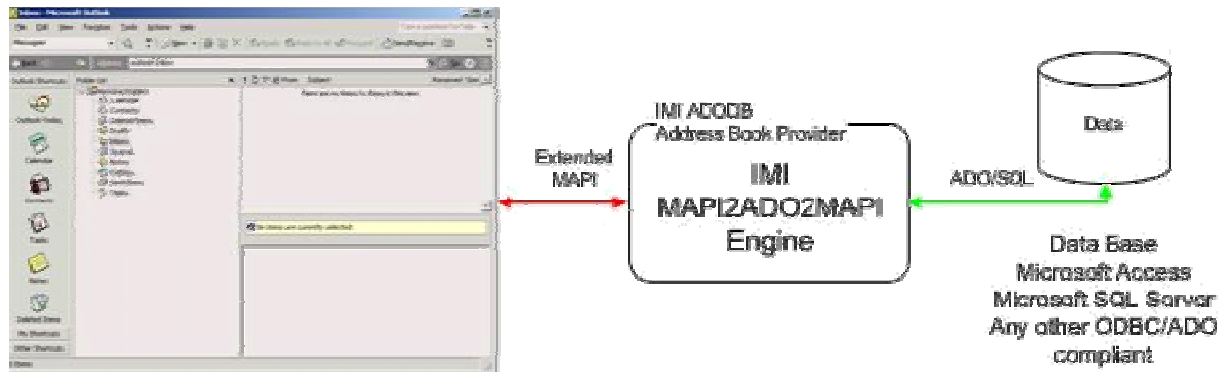
Our Address Book based on ADO and Extended MAPI uses intensively the COM interfaces provided by Microsoft – for ADO: Connection, Command, Recordset; and Extended MAPI: IABProvider, IABLogon, IABContainer, IMailUser, IDistList, etc.

We avoided using ready-made Delphi components for the ADO part in order to enhance performance, and to reduce the size of the compiled end DLL.

The current version included in the project consists of two parts – an Administrative part and the Address Book Provider itself. In the administrative part one can create new entries (contacts) in the database that will be accessible afterwards in Outlook through our Address Book.



For the Outlook user all entries (contacts) that our Address Book offers are read-only, that is they cannot be edited. This is done in order to avoid editing or harming the data by chance. Of course all this does not interfere with the process of sending e-mails to the users from our Address Book.



Outlook sends a query to the Address Book Provider, for instance "find and show me the data of all users working in Division X". Our Address Book Provider transforms the Extended MAPI commands into SQL queries. These queries are directed to the database, in our case - Microsoft Access. The result is sent back to the Address Book Provider where it is transformed into Extended MAPI interfaces familiar to Outlook. As an end result the Outlook user sees a standard familiar screen with data.

User Interface

Our Address Book Provider provides the following fields:

1. General Subdivision

1.1. Names

- 1.1.1. Full Name
- 1.1.2. Initials
- 1.1.3. Title
- 1.1.4. Given Name
- 1.1.5. Middle Name
- 1.1.6. Family Name
- 1.1.7. Name Suffix

1.2. General Info

- 1.2.1. Company
- 1.2.2. Company Main Phone
- 1.2.3. Department
- 1.2.4. Business Phone
- 1.2.5. Job Title
- 1.2.6. Profession
- 1.2.7. E-mail
- 1.2.8. Photo (Picture)

John Doe Smith Properties

General | Business | Personal/Home | All Phones | Other

Names

Full: John Doe Smith Initials: J.D.S. Title: Mr.

Given: John Middle: Doe Family: Smith Suffix:

General Info

Company: Dummy Company Department: Marketing

Company Main Phone: +1 333 123 456 Business Phone: +1 333 555 555

Job Title: Chief Profession: Actuary

E-mail/Fax: Address: SMTP some@dummy.org User Photo

Add to: Personal Address Book

OK Cancel Apply Help

2. Business Subdivision

2.1. Business Address

- 2.1.1. Country
- 2.1.2. State
- 2.1.3. City
- 2.1.4. Post Code
- 2.1.5. Street
- 2.1.6. P.O.Box

2.2. Business Phones

- 2.2.1. Main Phone
- 2.2.2. Fax
- 2.2.3. ISDN
- 2.2.4. Other Business Phones
- 2.2.5. Company Main Phone
- 2.2.6. Assistant Phone

2.3. In Company

- 2.3.1. Organizational ID
- 2.3.2. Office Location
- 2.3.3. Manager Name
- 2.3.4. Assistant Name
- 2.3.5. WWW Home Page

John Doe Smith Properties

General | Business | Personal/Home | All Phones | Other

Business Address

Country: USA Province or State: NC City: Charlotte

Postal Code: 100000 Street: 77, The Best Place Dummy P.O.Box: 119

Business Phones

Main Phone: +1 333 555 555 Fax: +1 333 555 111 ISDN: NONE

Other Business Phones: 123 456 789 432 123 777 432 123 778 432 123 779

Company Main Phone: +1 333 123 456 Assistant Phone: +1 333 555 333

In Company

Organizational ID: 123456789 Office Location: 12, N. main 104

Manager Name: The Big Strong Boss Assistant Name: All staff

Home page: http://www.dummy.org

Add to: Personal Address Book

OK Cancel Apply Help

3. Personal/ Home Subdivision

3.1 Address

- 3.1.1. Country
- 3.1.2. State
- 3.1.3. City
- 3.1.4. Post Code
- 3.1.5. Street
- 3.1.6. P.O. Box

3.2. Phones

- 3.2.1. Main Phone
- 3.2.2. Fax
- 3.2.3. Mobile (Cell)
- 3.2.4. Other Home Phones
- 3.2.5. Pager (Beeper)

3.3. Personal

- 3.3.1. Spouse Name
- 3.3.2. Native Language
- 3.3.3. Birthday
- 3.3.4. Gender
- 3.3.5. Government ID
- 3.3.6. WWW Home Page

4. All Phone Numbers Subdivision

4.1. Primary Phone Numbers

- 4.1.1. Phone
- 4.1.2. Fax
- 4.1.3. Car
- 4.1.4. Callback
- 4.1.5. Other
- 4.1.6. Telex

4.2. Business

- 4.2.1. Main
- 4.2.2. Fax
- 4.2.3. ISDN
- 4.2.4. Others
- 4.2.5. Company Main
- 4.2.6. Assistant

4.3. Home/Personal

- 4.3.1. Main
- 4.3.2. Fax
- 4.3.3. Others
- 4.3.4. Mobile
- 4.3.5. Pager

5. Miscellaneous

5.1. *Other Address*

- 5.1.1. Country
- 5.1.2. State
- 5.1.3. City
- 5.1.4. Post Code
- 5.1.5. Street
- 5.1.6. P.O. Box

5.2. *Nickname*

5.3. *Preferred Name*

5.4. *Children*

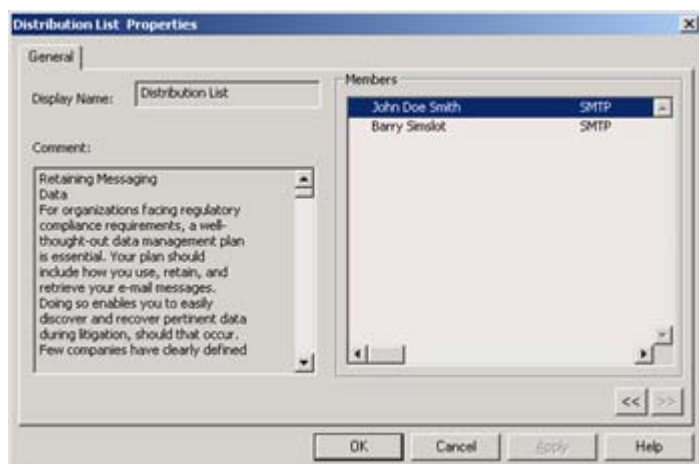
5.5. *Hobbies*

5.6. *Comment*

The screenshot shows a Windows-style dialog box titled "John Doe Smith Properties". It has several tabs: "General", "Business", "Personal/Phone", "All Phones", and "Other". The "Other" tab is selected. The dialog contains the following fields and sections:

- Other Address:** A group box containing "Country:" (N/A), "Province or State:" (N/A), "City:" (N/A), "Postal Code:" (N/A), "Street:" (N/A), and "P.O.Box:" (N/A).
- Nick Name:** A text field containing "Chief".
- Preferred:** A text field containing "John".
- Children:** A list box containing "Elton", "Ken", and "Lilan".
- Hobbies:** A list box containing "Car" and "Fishing".
- Comment:** A text area containing the text: "THE FIRST AMERICANS
At the height of the Ice Age, between 34,000 and 30,000 B.C., much of the world's water was locked up in vast continental ice sheets. As a result, the Bering Sea was hundreds of meters below its current level, and a land bridge, known as Beringia, emerged between Asia and North America. At its peak, Beringia is thought to have been some 1,500 kilometers wide. A moist and treeless tundra, it was covered with".
- Buttons:** At the bottom, there is an "Add to:" label, a "Personal Address Book" button, "<<" and ">>" navigation buttons, and "OK", "Cancel", "Apply", and "Help" buttons.

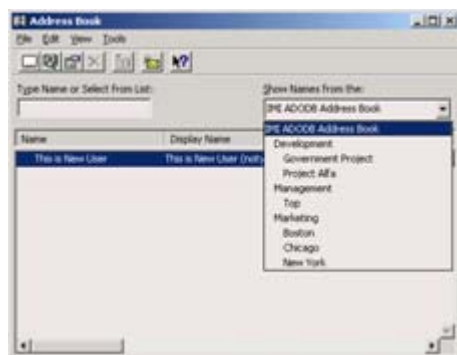
Of course, these fields may be changed– some of them may be taken out, and new ones may be added. It depends on your personal preferences. For instance we thought it would be good to add a photo of the users – so if our IMI ADODB Address Book is used by the “big boss”, he would also have a visual image of who he is sending his letters to, and in addition when an employee enters his office he would no longer ask himself the question “who the hell was this guy?” ☺



In addition to sending mail to individual users, we also implemented a Distribution List object. It enables you to create a group of users by a predefined criterion. While developing it, we tried to avoid problems such as the

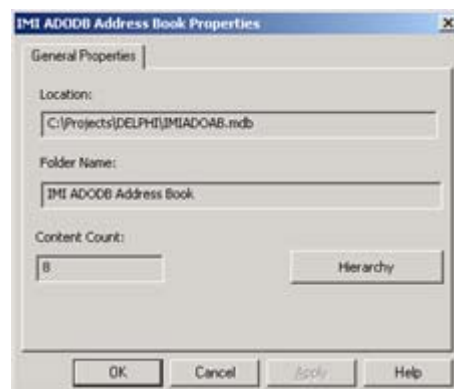
location of the user in a concrete SubFolder and moving him/ her from one place into another interfering with the presence of the respective user in the given Distribution List.

All entries regardless of whether they are individual (contacts) or a Distribution List are stored in the Container. The main root Container is called IMI ADODB Address Book. Usually all entries (contacts) are stored there. In addition our Address Book Provider maintains a hierarchic structure of a Recipient Containers. You may define SubFolders (Containers) that reflect the hierarchy of a given organization, company, agency, etc... For instance, you can easily create a container that will store all e-mail addresses of the Marketing Department employees.



When you select Address Book, we have seen to it that Outlook shows in an adequate way the hierarchy created by you.

In addition to the one for contacts, we have implemented a Property



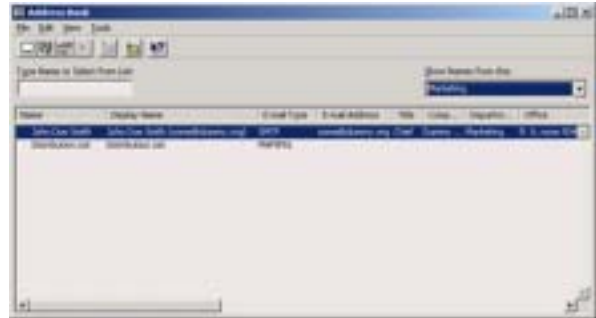
Panel for each Container.

In the current version it provides basic information such as Location, Folder Name, Content Count and Hierarchy, but you may extend these by adding for instance an option of exporting the contents to a text file or to Card Files.

Additionally extended information is produced in the Content table of each container. You can see fields such as Display Name, Title, Company, Office, etc.

This implementation is our "IMI ADODB Address Book", and it contains the following cells for the Content Table:

- Name
- Display Name
- E-Mail Type
- E-Mail Address
- Title
- Company
- Department
- Office Location
- Business Phone



As you can guess, it is possible to add or remove some of the cells in accordance with the concrete installation.

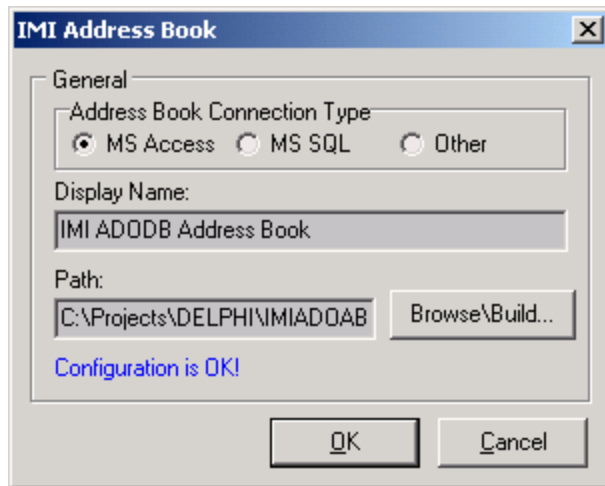
You may **search** for a concrete entry by using a simple Find option via the "Type Name or Select from List:" field and also through the Extended Search option that we have implemented. Using it, you may restrict the result list to the entries containing for instance Department name beginning with Mark or company name beginning with National.

It will be up to you to decide what fields to include.



In this version of our "IMI ADODB Address Book" we have also added a **configuration** part. It covers all necessary stages for its tuning.

You can choose the type of database – Microsoft Access MDB, Microsoft SQL Server or another ODBC compatible database



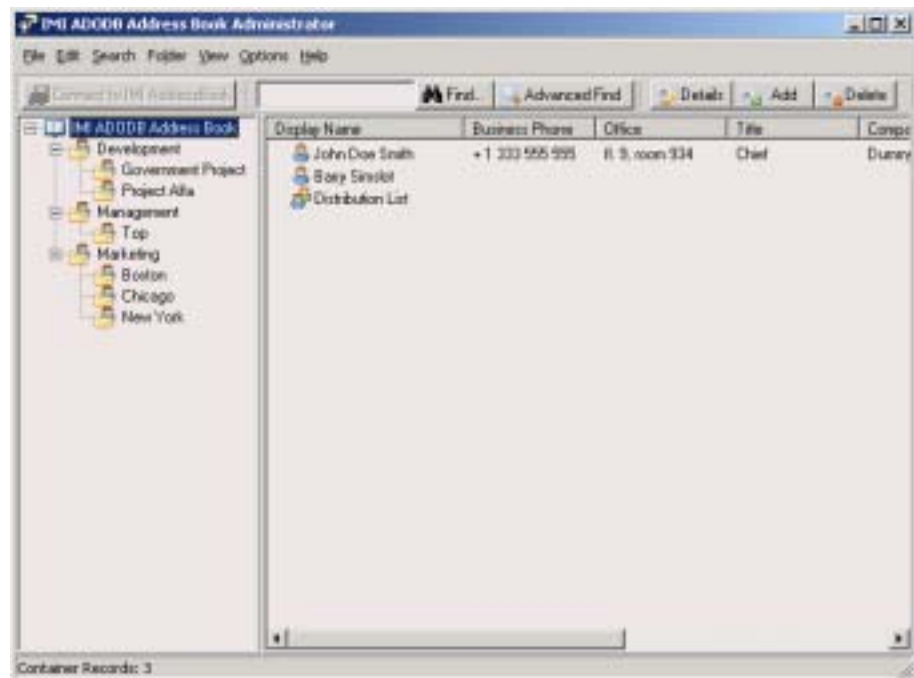
You can also define the necessary user name and password in relation to the DB.



Since the current version is only a demo, it does not contain a Help File.

The **administrative part** that we have developed for “IMI ADODB Address Book” uses intensively ADO interfaces. We have avoided the Delphi ADO components (in the development of IMI ADODB Address Book Provider as well), and we have worked directly with the tools provided by Microsoft. We have done so to enhance performance.

You can create new folders, contacts and Distribution Lists in the administrative part. Using the “drag and drop” option, you may move objects from one folder into another, to perform “Soft Delete” of objects (in this case they are marked as deleted and are invisible for the users, but continue to exist in the tables, so that you may restore them at a later stage, if necessary), add new objects to the Distribution Lists, delete them, etc. The process and interface are intuitive, so we needn’t go into details.

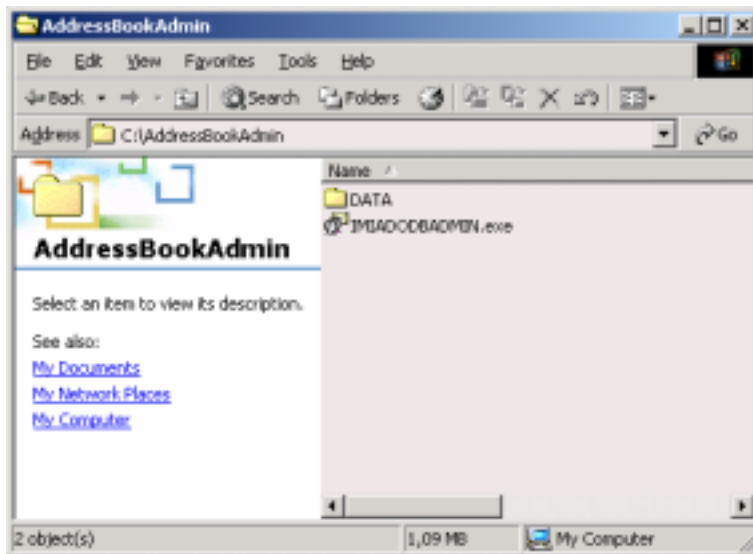


How to install it? We do not develop an installation program so you can be sure that you have installed the additional modules that we have not commented on here.

The package contains the following files:

- The present document;
- IMIDAB32.DLL (IMI ADODB Address Book Provider);
- IMIADODBADMIN.exe (IMI ADODB Address Book Administrator);
- IMIADOAB.mdb (Microsoft Access 2000 MDB file).

Create a folder, for instance C:\AddressBookAdmin and copy IMIADODBADMIN.exe into it



If you wish, you may copy IMIADOAB.mdb in the same directory or create a new one. Below we have copied the file in the subdirectory DATA

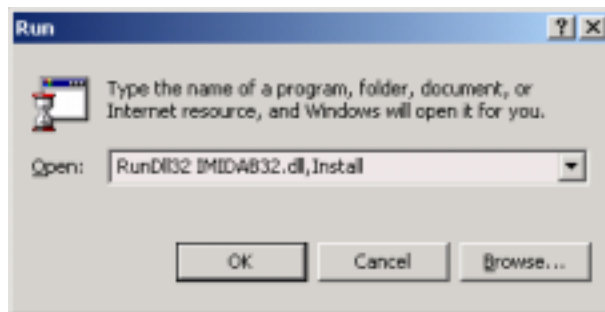


Copy the file IMIDAB32.DLL in the system folder System32. Usually the path is C:\WINNT\system32 or C:\Windows\system32.



From **Start** - > **Run** execute

RunDll32 IMIDAB32.dll,Install



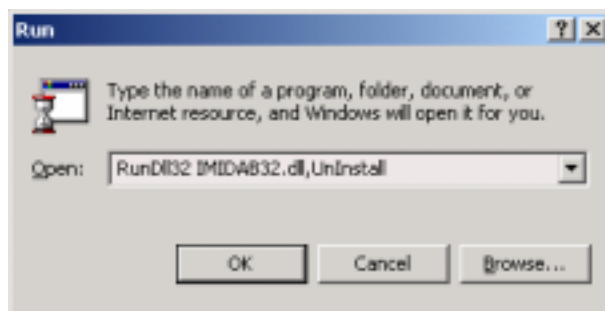
Attention! The syntax, spaces, caps and small letters of the above command are meaningful.

If you have installed "IMI ADODB Address Book Provider" successfully, you will see the message: "INSTALL -> DONE!"



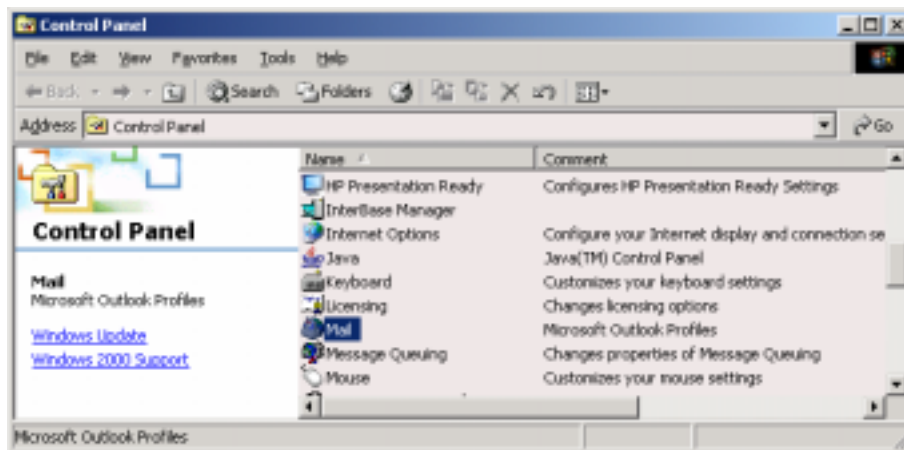
To **uninstall**, you have to perform analogous actions, but here the command would be:

RunDll32 IMIDAB32.dll,UnInstall

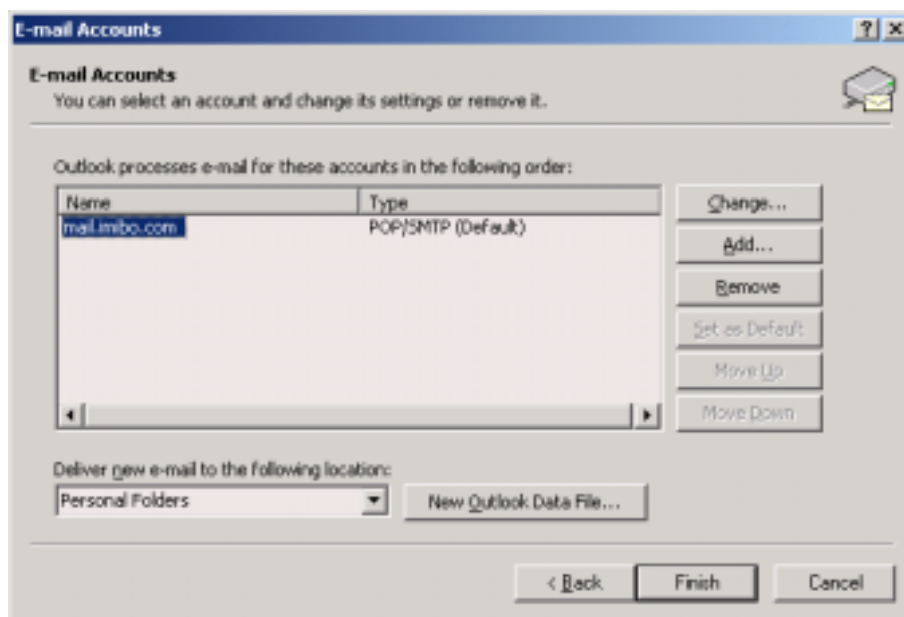




Start the Outlook Profile manager from the control panel.



Create a new test profile.

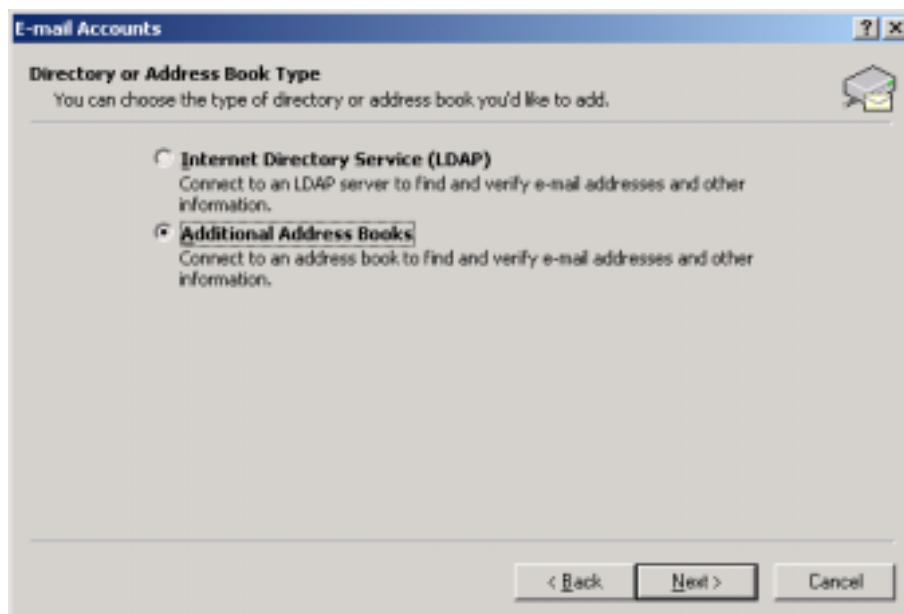


Make sure you can receive and send e-mails with it.

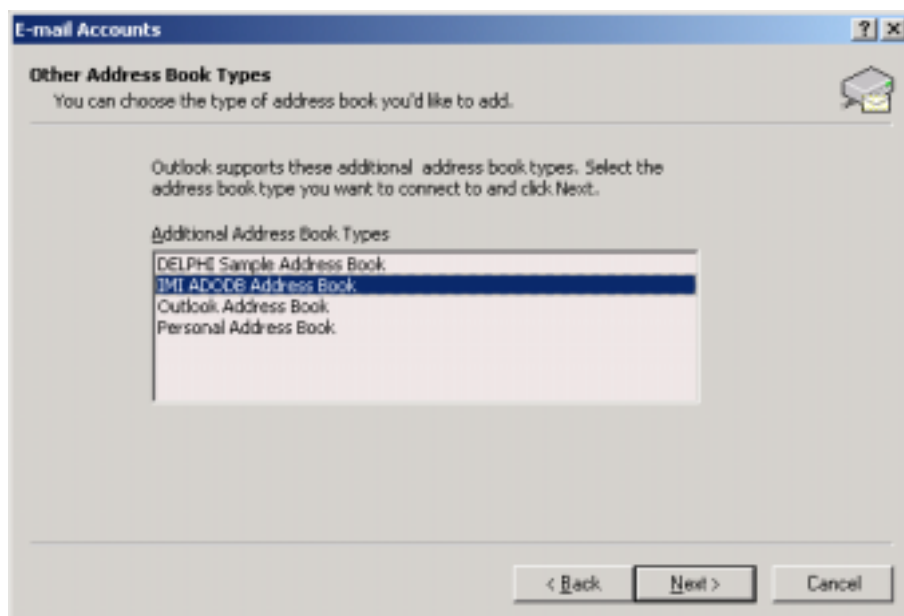
Then select "Add a new directory or address book" from the Outlook Profile manager



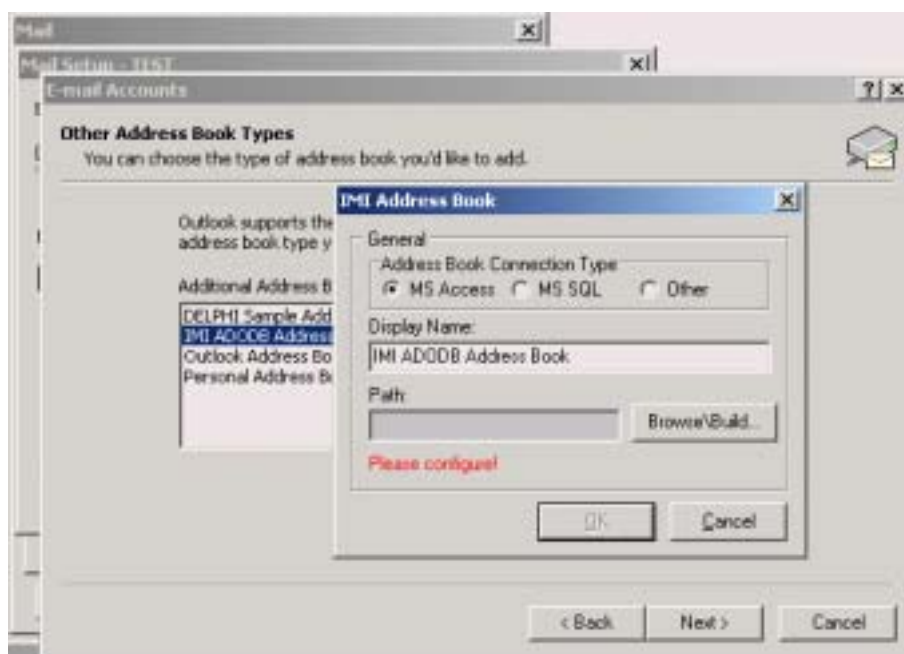
Select "Additional Address Book" and continue.



From the list of providers choose "IMI ADODB Address Book" and continue.



The configuration window of our Address Book will pop up.

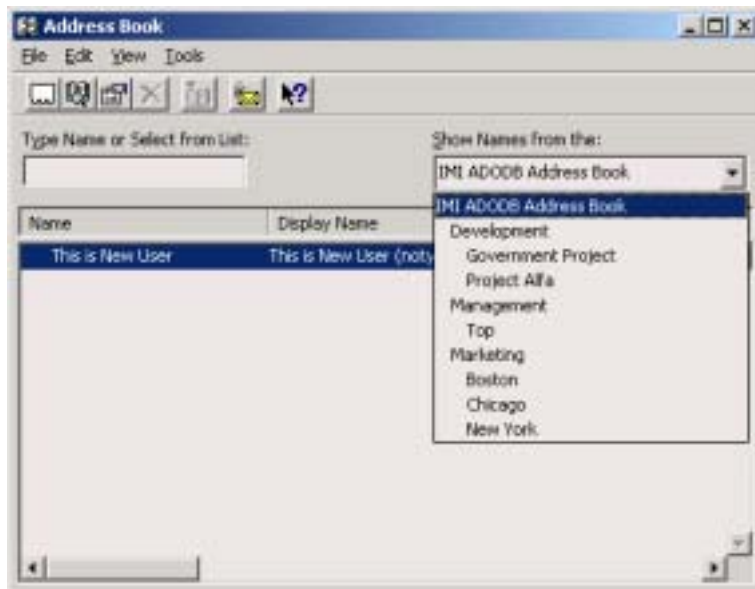


Click on the "Browse\Build" button and indicate where "IMIADOAB.mdb" is.



Click on the OK button to finish the configuration.

Starting the Outlook with the profile we have just created and selecting "Address Book", you will see the sample "IMI ADODB Address Book".



The "IMIADOAB.mdb" file contains 2 sample entries for IMailUser and one for IDistList. There is also a "Soft Deleted" entry that you may restore or delete permanently. Trying to delete or edit the table entries in IMIADOAB.mdb without the help of the administrative program will create errors.

So far everything is great. But where can you use our "IMI ADODB Address Book" and why did we work so hard to develop it when Outlook provides Contacts and in addition there is the Exchange Server with its GAL?!?

"IMI ADODB Address Book" is predominantly for collective work in small and medium-size organizations. In many cases it is not financially viable for them to use solutions such as Microsoft Exchange Server, when the staff is less than 50 employees, and there are also too many Free SMTP/POP3 servers that one can make do with, incl. the ones in Windows 2000/2003 Server. On the other hand, the respective organization most probably has a number of contractors and clients with whom it has to exchange e-mails. "IMI ADODB Address Book" is an extremely appropriate solution for centralized e-mail address and user information storage that makes data accessible to all users. Thus the centralized data update ensures that information is up-to-date and puts an end to the questions: "what was the phone number of...?", "what was the e-mail of...." «what is the mail delivery address of XXXX company». ... What you have to do is configure "IMI ADODB Address Book" so that all users have access to the centralized Database. In addition, it may be attached or changed so as to use the company's HR information. Of course you may find many other ways to use "IMI ADODB Address Book" or to develop it further, if you wish to do so, but we leave all this to you.

You may send your questions regarding the source code of IMI ADODB Address Book Provider, as well as all your remarks and proposals to IMIADOABP@imibo.com

NB: All data contained in the Screen Shots are for the purposes of our examples and are not related to concrete names, phone numbers and addresses. If anyone should recognize their data in the examples, this would be by mere chance ☺

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