



USAID CAPITAL MARKETS DEVELOPMENT

THE PRAGMA CORPORATION

USAID
Securities
Market System
Installation
Manual



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Introduction

USAID Securities Market System System (USMS) is a software package designed to provide end-to-end computer processing for a country's securities market. This manual contains directions on how to install the USMS client and server modules. This implementation of USMS and this manual in particular will deal with the following components of USMS.

- USDS - USAID Depository System
- USTA - USAID Trading Administrator System
- USTS - USAID Trading System
- USBW - USAID Broker's Workplace
- USMS - SQL Server Database

USMS has been designed using client/server technology. The client software has been designed using the following programming language platforms:

- Microsoft Access-97/Visual Basic for Applications for USDS, USTA and USTS
- Microsoft Visual InterDev for USBW

The server application is shared between all the client applications. The server programming and database uses Microsoft SQL Server 7.0 (SP1) database system.

The system can be run both on a local area network and remote access mode using Windows NT RAS services and Windows 98 DUN.

This document provides the installation instructions for all system components and walks through an initial test trading session and depository clearing cycle.

System Requirements

- Windows 95, Windows 98 or Windows NT
- Microsoft Access 97
- Microsoft Office Service Pack 1, 2
- ODBC Data Source to be used for connection to the SQL Server
- Internet Explorer 5.0
- The system short date format on the client computers **MUST** be in the European format of dd/mm/yy or dd/mm/yyyy. The server machine is run using American date format of mm/dd/yy or mm/dd/yyyy.

Minimum computer configuration: Pentium 100, 16 Mb, 15 Mb free space on HD.

The system interface can be run in two languages, currently English and Russian. Whatever second language is used, the client computers should be installed using that language for the regional settings and then if English is desired, simply switch back to English as the regional settings.

Common Function Buttons

Throughout the client modules of the USMS system, there are many buttons which are common to all forms. These buttons have been standardized for the purpose of convenience. These buttons perform functions to navigate from record to record, change records, add new records or delete records:



Go to first record



Go to previous record



Go to last record



Go to next record



Create a new record



Edit this record



Delete this record



Save this record



Exit the current screen.



Refresh data (there are continuous changes in the system whereas on the screen the information remains static after opening the form or since last time an operation was carried out. This button allows the information reflected on the screen to be refreshed)

System Setup

Setup Assumptions

USMS is a client/server computer system built around the following computer technologies: Window NT Server 4.0 (Service Pack 5), Microsoft SQL Server 7.0 (Service Pack 1), Microsoft Access 97 (Service Pack 2), and Microsoft Visual Interdev (Visual Studio 6.0, Service Pack 3).

To install and operate this system basic familiarity with the above platforms is assumed. During the installation process, skills with Microsoft SQL Server 7.0 Enterprise Manager and Microsoft Access 97 will be required. This manual will not supply those skills. Operational knowledge of those products is assumed.

Windows NT Installation

For correct functioning of the dual-language features of USMS and the system as a whole it is necessary to perform the following steps for Windows NT installation:

- Format the system drive (drives)
- Install Windows NT 4.0
- Add the local language to the keyboard languages at “Keyboard properties” at “Control Panel”
- Set up the “Regional Settings” to local language (for example Russian) and check the box for “Set as system default locale”
- Reboot server
- Install Windows NT Service Pack 5 (6)

These steps will insure proper operation of the system.

MS SQL Server 7.0 Setup

On the Windows NT Server machine that was installed above, perform a setup of Microsoft SQL Server^{7.0}.

During the installation of SQL Server make the following selections:

- Sort Order - dictionary order case insensitive
- Character Set for supporting Country language (For example: 1251 - Russian language)

After the SQL Server installation it is necessary to install SQL Service Pack1.

Client Application Installation

The following section will cover the installation of the client Microsoft Access applications for the three modules: USDS, USTA, & USTS. These modules are needed to run USMS and beginning trading and depository operations. The installation of the applications will be covered as well as the steps necessary to start the system properly.

Microsoft Access Workgroup File

There is a Microsoft Access Workgroup file included on the installation CD-ROM. Workgroup files provide the information needed to secure various functions of an application. The USMS modules: USTS, USTA, & USDS do not require the use of this workgroup file to be run. This workgroup file simply contains two users: Admin (password: admin) and USMS (no password). When initially running the USTS application, this workgroup is used to logon as USMS which triggers a program to run which will reattach all of the data tables in the USTS application. That will be explained in detail later in this document.

Special ActiveX Components

The USDS and USTA programs use only standard Microsoft Access components, but for USTS program it is necessary to register some additional ActiveX components:

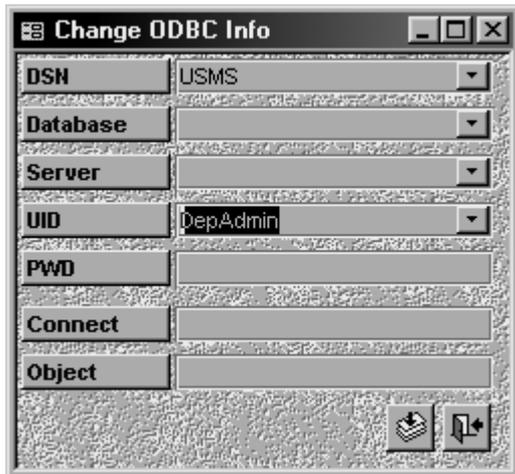
- comctl32.ocx
- Comctl332.ocx
- comdlg32.ocx
- Mscal.ocx
- Mscmct2.ocx

These components are on the installation CD-ROM in a subdirectory called OCXFiles. Simply, copy them from this directory to the Windows\System directory on the machine(s) that you are installing the USTS application on. **It is important** that this step be done first before opening the **USTS.mdb** or the references to this components will be lost.

USDS – USAID Depository System Installation

1. Open the **USDS.mdb** in Microsoft Access.
2. Start the “Change ODBC” function from Depository Menu button on the toolbar

This is the form for creating or changing the ODBC connection to the server database:



The information to be entered is:

- DSN –any name that will be used as DSN name (for example “USMS”). This process will create the DSN if one with the name entered doesn’t already exist.
- Database – the name of the SQL Server Data Base
- Server – the name of the computer that is running SQL Server
- UID – ‘DepAdmin’ –the SQL user name for the Depository system
- PWD – SQL user password (optional parameter), the current DepAdmin as installed in the previous steps requires no password. That may be changed later to completely secure the application.

After entering this information click this button  to reattach all database objects to the newly created SQL Server database. When the processing is completed the title bar of the Change ODBC form will show the message: **Finished Processing**. Click the exit button  to close this window.

The USDS system is now ready to use.

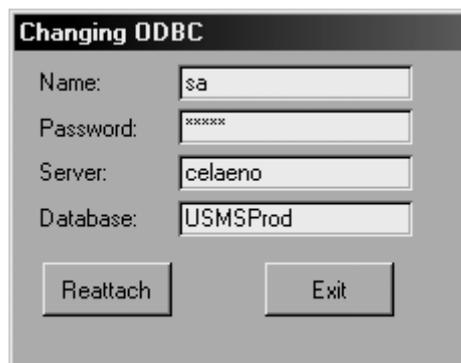
USTA – USAID Trading System Administrator Installation

1. Copy the file **USTA.mdb** from the installation disk to a selected directory on the client machine.
2. Open the USTA.mdb
3. Start the “Change ODBC” function from the TFAdmin menu and fill the form in as described previously in the USDS section above.

USTA is now ready to use.

USTS – USAID Trading System Installation

1. Create a directory for USTS.mdb on the client machine. Copy that file from the installation CD-ROM to the directory.
2. The file **USMS.mdw** will also need to be copied and joined using the MS Access Workgroup Administrator.
3. Open the USTS.mdb (UserID: USMS; No Password)
4. Start “Start Work” from USTS menu. This will bring up the Changing ODBC window to create the connection to SQL Server. This screen will only be displayed for the user **USMS** who is a member of the MS Access Workgroup file: **USMS.mdw**.



The details are:

- Name – any SQL Server Login
 - Password – the password of the SQL Server Login
 - Server - SQL Server name
 - Database - SQL Server Database name
5. Fill in the above described information and click the **Reattach** button. This will relink all database objects to the specified SQL Server and prepare USTS for work. At the end of the reattachment process a dialog box will be displayed confirming successful completion of the process. Upon clicking “OK”, the application will be completely closed.
 6. At this point the application is ready to use. When distributing the application to brokers for use at their offices or on the trading floor, it is recommended to create an MDE file for this application. This is done off of the Tools/Database Utilities menu in the MS Access main

window. After the MDE file has been created, open it and from the Tools/Startup menu display the following screen.

The screenshot shows the 'Startup' dialog box with the following settings:

- Application Title: USTS - USAID Trading System
- Application Icon: (empty)
- Menu Bar: (default)
- Display Form/Page: StartLogo
- Display Database Window:
- Display Status Bar:
- Shortcut Menu Bar: StockWatchPopUps
- Allow Full Menus:
- Allow Default Shortcut Menus:
- Allow Built-in Toolbars:
- Allow Toolbar/Menu Changes:
- Use Access Special Keys:

Buttons: OK, Cancel, Advanced >>

(Show Database Window, Show Immediate Window, Show VB window, and Pause Execution)

This screen is used to set the startup options for the current database, in this case **USTS.mde** from the previous step. The goal here is to secure the application in an easy and efficient manner to protect the system from unauthorized access by users. On the above screen set all of the options as displayed. The **Advanced** button will have to be clicked to show the **Use Access Special Keys** portion of the form. Uncheck all of the options that are not checked in this example. Also, set the Display Form/Page list to the StartLogo form. This will only allow users to run the application when it is started. They won't be able to enter the database window, source code or change any objects in the database.

- When the USTS system is run by brokers and traders, the **USMS.mdw** workgroup file should not be used. Use the "MS Access Workgroup Administrator" program to join the default **System.mdw** workgroup. This file is usually located in the **Windows\System** directory. The reason to use the **System.mdw** file is to not inconvenience the users of the system by having to logon to the workgroup file and then logging on to SQL Server as well.
- Each broker/trader user of the system will have to have a SQL Server login defined on the SQL Server computer. This will be the login used to access the USTS system. Use the SQL Enterprise Manager to setup up SQL Logins for each user prior to using the trading system. These logins must match the field: **Broker Mnemocode** in the **Brokers** reference in the Depository. This field is a four character mnemonic. The first two letters are the abbreviation for the firm that the broker/trader belongs to. The last two characters are digits representing the number of the broker. This mnemonic is generated automatically when setting up a

broker in the Depository references. Use this code as the SQL Server login. These logins should also be assigned to the SQL Server user group: Brokers. This is very important for permissions to the data and programs on SQL Server.

9. When the SQL Server logins for the brokers have been created, USTS can be run.
10. Open the USTS.mdb. Select "Start Work" from USTS menu. The following form will appear to be used for entering the Login and Password. Use the SQL Login and Password that was created for the broker on SQL Server as described previously.



The image shows a Windows-style dialog box titled "Identification user". It has a standard title bar with minimize, maximize, and close buttons. The main area contains two text input fields. The first is labeled "Name" and the second is labeled "Password". Below these fields, there are three buttons: "Enter", "Change password", and "Exit". The dialog box has a light gray background and a dark border.

Loading the USMS System

The next steps will complete the installation and show how to work with the USMS components to run a trading session and process clearing and settlement for the trade results. This will involve using some test data to run a trading session and settlement cycle. This will verify the correct installation of the system. The process of building the USMS database is three fold: run some SQL Server scripts to create the objects of the database (tables, queries, procedures, etc.), then enter some static reference data and test companies, securities, and brokers using the USDS client application, then run two more SQL Server scripts to complete the initialization of the database. For the first time through this process just use fictitious data. After the process has been completed once successfully, that database can be backed up and transferred to a new name (see SQL Server documentation) and then a new USMSProd database can be created using actual live data. Simply follow the steps below for both processes.

Building the USMS Database

On the USMS installation CD-ROM is a directory called **Setup**. This directory contains the SQL scripts that will be run to add all of the objects to the database.

1. Using Microsoft SQL Server Enterprise Manager, create a new database with the name of **USMSProd**. This name is crucial to all of the following steps. Simply create a new database with that name and accept all of the defaults. After a successful installation, this database can be copied to a different name and the parameters can be adjusted for the particular installation.

The following steps all use SQL scripts contained in the **Setup** directory on the installation CD-ROM. That directory has several sub-directories label Step1-7. In each of those directories is the necessary script to run for each of the following steps. These scripts should be run using the Query Analyzer tool in SQL Server.

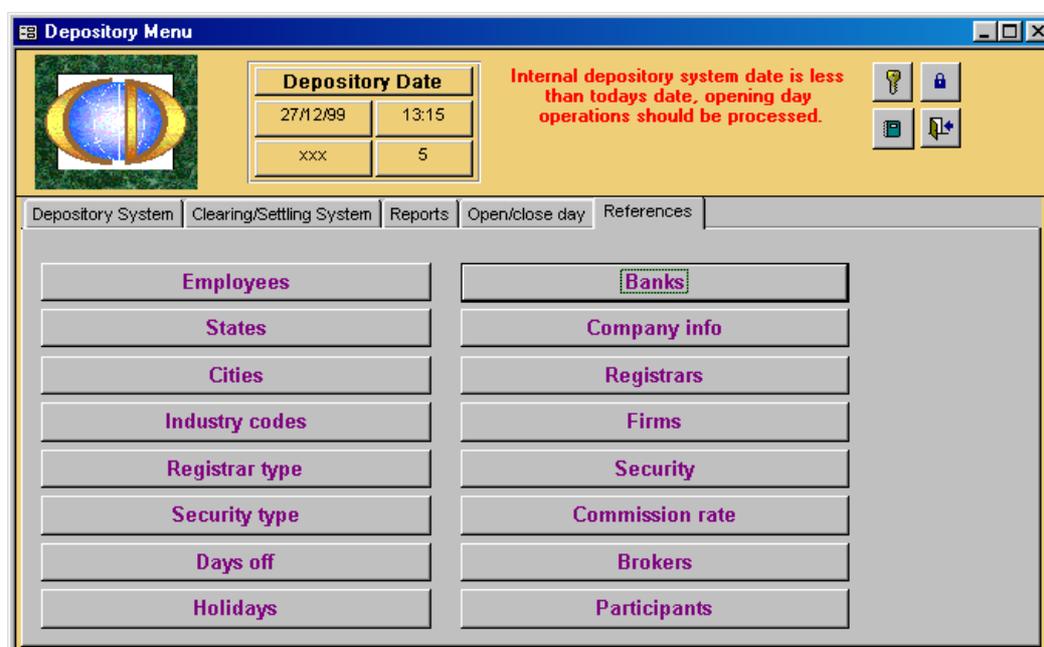
2. In the **Step1** subdirectory, run the SQL script: **CreateLogins.sql** This script adds users and groups to SQL Server. It drops the users first so some *user doesn't exist* messages might appear. Ignore them.
3. In the Step2 subdirectory, run the SQL script: **Tables.sql** to create all of the database tables, indexes and relationships.
4. In the Step3 subdirectory, run the SQL script: **Defaults.sql** to add default field definitions to the tables.

5. In the Step4 subdirectory, run the SQL script: **Views.sql** to create all of the data views.
6. In the Step5 subdirectory, run the SQL script: **Procs.sql** to create the stored procedures for the database.
7. In the Step6 subdirectory, run the SQL script: **PrepareDB.sql** to initialize some of the data tables.

That completes the first phase of the database building and initialization.

Initializing Static Reference Data

The Depository System is ready to work now. First of all it is necessary to fill in the reference data for the system.



The first step is to fill the References from the left side of the list because these references are used during the entry of the References on the right side.

Preparing the Reference Data

After starting the Depository system, click on the **References** tab in the main window. This will display the screen as illustrated above. The next step of USMS initialization is to enter all of the static reference data needed to start a trading session. This will involve working with the following references:

- States

- Cities
- Industry Codes
- Registrar Type
- Security Type

Perform the following steps to step up some reference data to allow testing of the installation of the USMS system. Don't worry about the accuracy of the data for now. This is merely a process to initialize some data and take the system through test trading and settlement to illustrate how the system works.

1. Click the References button labeled **States**. See the Depository manual for specific information for each screen. Be sure to use the new record button  to begin entering data, and enter country information for one or two countries. This involves entering the country name and a two letter abbreviation for the country. After entering each record click the save button  to write the data.
2. Do the same process for the **Cities** reference. CityID is system generated and does not have to be entered. Just enter the name of a city.
3. The next reference is **Industry Codes** to define the sectors of company activity. The code should be two digits only.
4. Now enter **Registrar Types**.
5. Enter **Security Type** next. Be careful here and note that the system reserves the second type for bonds as it changes the security information to include interest and maturity data. So enter Common Stock as type 1. Enter bonds as type 2. Then enter more types if needed.

That completes enough entry of static data to begin entering company, security, broker and participant information.

Entering Initial Market Data

Now the right side reference data can be entered. This data contains information about participants and securities active in the market. Data will be entered for Banks, Companies (Issuers), Registrars, Firms (Brokerage), Securities, Brokers, and Participants. Follow the next steps to initialize this data properly.

1. Select **Banks** and enter the requested information.
2. Select **Company Info** and enter data for one company. This company information relates to a company that will issue securities to be traded on the system.
3. Next click the **Registrars** reference and setup two registrars. A share registry and a payment agent. These will both be used when defining securities.
4. Setup **Firms**, which are the firms that are the market participants. Here, setup two firms so that a trade between two parties can be completed and testing of the system accomplished. Some notes: select **Firm Status** of Active, **Participant Type** of Authorized (for trading), and **Initial Credit** of \$1,000,000. The **Initial Credit** field is used to control the amount of buy orders that a firm can issue onto the market based on credit risk. It is not necessary to enter the remaining credit field. The system will calculate that automatically.
5. Now click the **Security** reference. Setup a security with which to test trade. Set **Type of Security** to one of the security types setup in the that reference. Don't select bonds for now. The **Admitted** field should be Trade and Depository, this allows the security to be traded and worked with in the depository. **Listing Category** should be listed for now. This allows identifying securities by listing category for multi-tiered trading. Be sure to select a registrar and a payment agent. When creating a security, the ISIN field is calculated automatically. Commissions don't need to be entered for this test.
6. Now select **Brokers** and setup two brokers from different firms to be the parties to a two-sided trade. Make sure that the two brokers are from different firms when firm is specified. Also, make sure that the **Broker Status** selected for each broker is Active.

This completes the second step in initializing the data for USMS.

Second Step of USMS SQL Server Database Initialization

In the **Setup** directory on the CD-ROM is a subdirectory name **Step7**. This directory has the final SQL Server script: **FinishDBSetup.sql** that needs to be run to complete the installation of the system. Use the Query Manager tool from SQL Server to run this script. This script runs two stored procedures in the database. One initializes a physical (“dummy”) broker to act as the contra-party on one-sided trades. The other creates depository participant accounts for the Depository itself. These steps rely on several tables of static data being in place to run successfully. The physical broker stored procedure needs State, City, Bank reference data to run successfully. The

create depository stored procedure needs securities to be entered on the system. That requires companies, registrars, etc. Basically, all of the static reference data that was entered in the steps above has to be present for these final two procedures to run successfully and for the installation of USMS to be successful. Remember this for entering actual production data if that data was not used for the previous steps. To bring up the production version of USMS repeat the previous steps and this step using actual data not fictitious test data.

Testing USMS

In this next step, the installation will be verified by conducting a trading session and performing a clearing/settlement cycle to process the results.

This will involve the following actions:

- accounts for the previously entered participants will be established in the depository
- deposits made to those accounts
- a trading session will be defined and started
- orders and trades will be made
- the trading session will be stopped
- the depository clearing and settlement cycle will be run to process the trade results
- the results will be verified on the reports

This process will complete the installation and serve as an instruction on how to run the USMS system to conduct daily depository and trading operations.

Preparing USMS for Trading

The setup of the initial reference data has been completed. Banks, Registrars, Companies, Securities, Firms & Brokers have been entered onto the system. When Firms were setup USDS automatically created a Participant record for each authorized firm. The next step is to define a nominee account for those participants and deposit some securities that can be used to do test trading with.

Creating Participant Accounts

Start the USDS application and select the **References** tab and then select the **Participants** button to display the following screen:

The screenshot shows a window titled 'Participants' with a 'List of Depository Participants' table. The table has two rows: 'Pragma Traders' and 'USAID Bank'. Below the table is a detailed form for the selected participant, 'Pragma Traders'. The form includes fields for Participant ID (1), Participant Name (Pragma Traders), Legal Person Attribute (Legal Person), Address (88 Way Over), Postal Address (88 Way Over), Phone #1 (454-9909), and Participant Type (Authorize Firm). Other fields include Participant's Firm (Pragma Traders), Work Address, Account # (321), Corr. Account # (123), MFO, Date of last change (21.03.2000), Contact Person, and Comments. At the bottom right, there are buttons for 'Refresh', 'Choose the firm', and 'Create Account'.

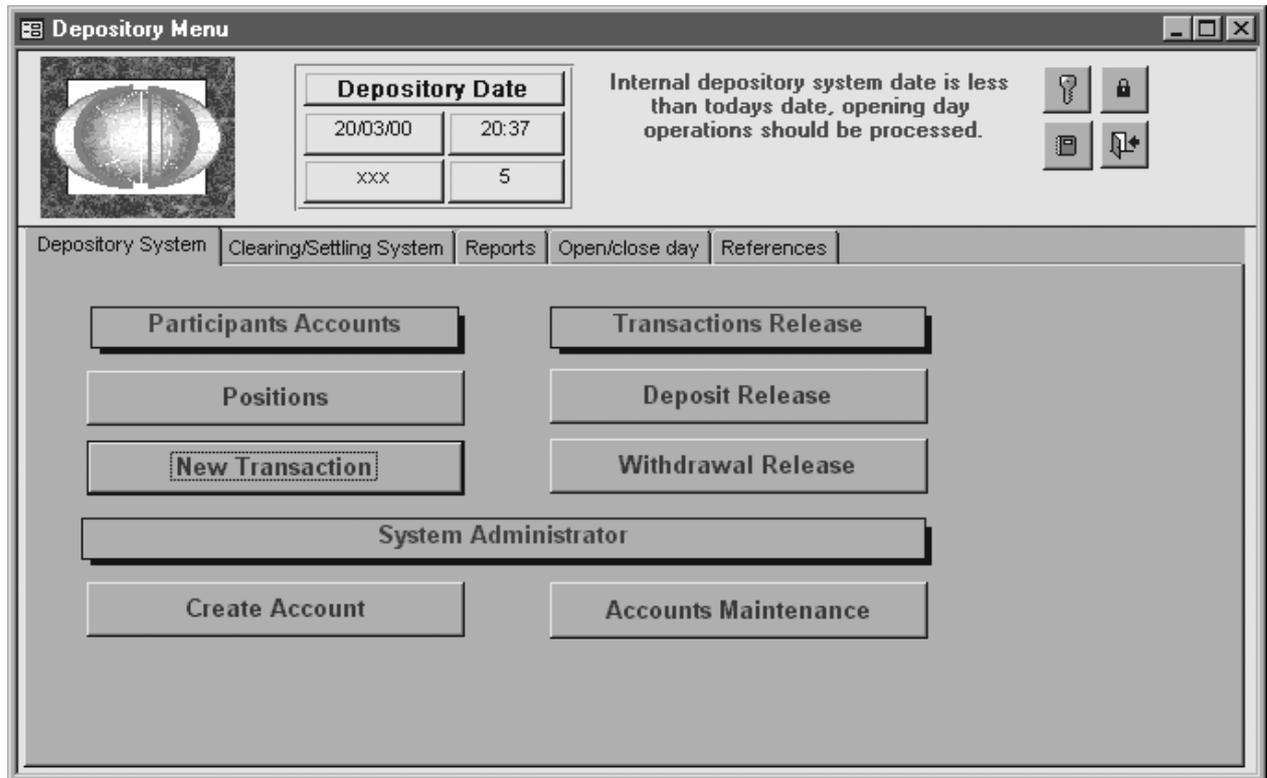
At the bottom right corner of the screen click the button **Create Account**.

The following screen will display:

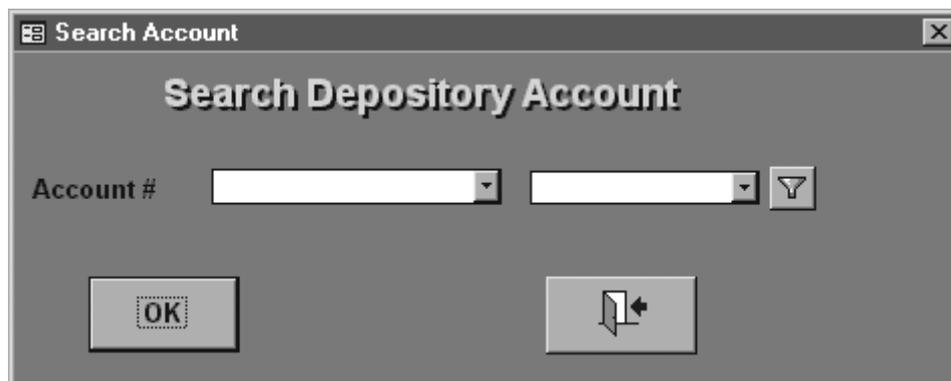
The screenshot shows a dialog box titled 'Create Account' with a subtitle 'Creation of account'. It features an 'Account #' field at the top right. Below this, the 'Participant' is listed as 'Pragma Traders'. The 'Account type' is set to 'Authorized Firm'. At the bottom, there are two buttons: one with a checkmark icon and another with a close icon.

Click on the arrow to the right of the **Account type** list box to display the account types. Select Authorized Firm for this account. Click the button with the check mark to create a new account for this participant. Then click the close button to close this dialog. Select the next participant in the list and repeat the process to create a second participant account. This will provide accounts to act as contra parties in test trading activity.

After completing the account setup, close the Participant reference window and select the Depository System tab on the USDS main window to display this screen:



Click the New Transaction button to begin the process of depositing securities in the accounts. The account search dialog box will be displayed.



Click the arrow on the right side of the **Account#** list box to display a list of the accounts defined on the depository system currently. Select the first participant account and then click the **OK** button to use that account for a new transaction.

This is the Account Transactions form used to enter deposits, withdrawals and transfers against depository accounts:

Make sure that the **Deposit** radio button is clicked, select a quantity less than what was the original issue for the selected security, and select the security to deposit by clicking the arrow to the right of the **Security** list box and selecting a security. Then click the checkmark button to complete the transaction. A dialog will show that the deposit was made. Use the **Change** button at the top left of the form to change accounts and repeat the process for the other account that was setup previously. After that is done, close the **Account Transactions** form. The main menu of USDS will be displayed with the **Depository System** tab highlighted. Click the **Deposit Release** button to display the form used to confirm deposits and release the shares into the accounts.

This dialog will be displayed:

Click the **Depository deposit** button to show the Deposit release form.

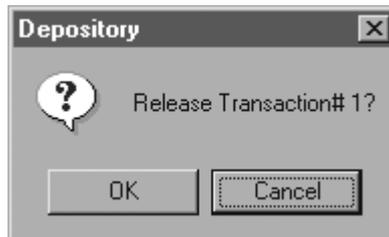
Deposit release

Confirmation of deposit

Transaction #	Account #	Trading Symbol	Security	Number of shares	Reference Number	Opening Date	Control Date	Partial Transfer	Employee ID
1	010000017	BIOF	U-S0101111-1-8	500	D/1	20/03/00	23/03/00	<input type="checkbox"/>	
* 2	010000025	BIOF	U-S0101111-1-8	1000	D/2	20/03/00	23/03/00	<input type="checkbox"/>	

Record: 1 of 2

Click the checkmark button to confirm the deposit and release the shares into the selected account. The following confirmation will appear, simply click OK to release the transaction.



If the transaction doesn't disappear from the screen click the refresh button. Repeat this process for the second deposit. This will place shares in both of the participant accounts. To verify this, close the **Deposit Release** form and select Positions from the **Depository System** menu. The **Search Depository Account** dialog will be displayed as before. Select an account to display the **Positions** form.

Depository Participant Positions
Active

Account

Pragma Traders Авторизованный

Managing Firm Pragma Traders

Symbol	ISIN	Total shares	Available	At the Stock Exchange	Allowed for trading	In Sell Trades	Last Changed
* BIOF	US0101111118	500	500	0	0	0	20 Mar 00

Record: 14 of 1

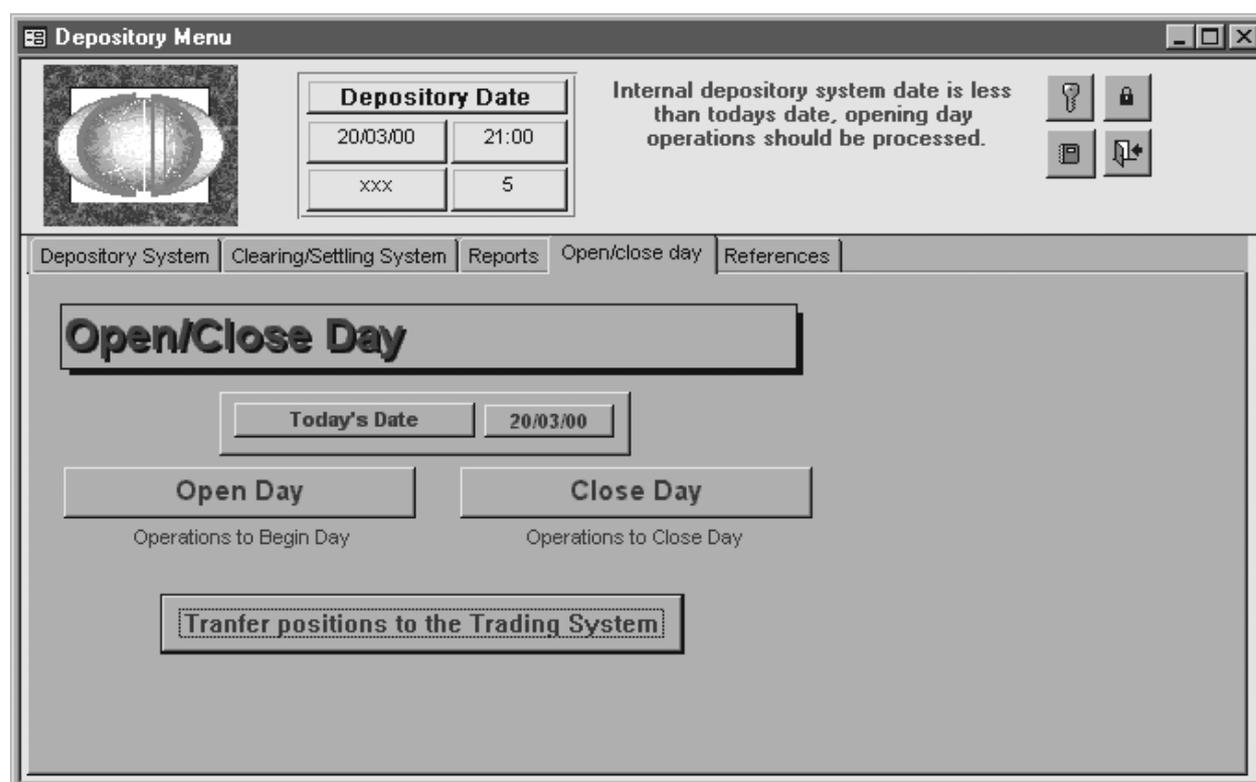
This form shows that shares are on deposit in this account available for activity. Use the **Change** button at the top left of the form to view the other account and confirm the deposit.

Starting a Trading Session

The next step is to define and start a trading session. This will allow test trading to be conducted to verify the installation of USMS. A trading session is initiated by a coordinated set of actions between the depository and the trading administrator.

Opening the Depository Day and Transferring Shares

The depository blocks shares that will be involved in trading and transfers those positions to the trading system. This is done from the USDS main menu **Open/Close Day** tab.



This is a two step process. Click the **Open Day** button and a dialog will confirm the new date. Click **OK** to that dialog and the depository day will be opened. Next click the **Transfer positions to the Trading System** button and confirm all shares by clicking **OK** on the following dialog box. This will block all shares in the depository from any activity until the trading session is completed. Individual share amounts can be moved to the depository from the **Positions** screen/**Transfer** button for a more dynamic method of blocking.

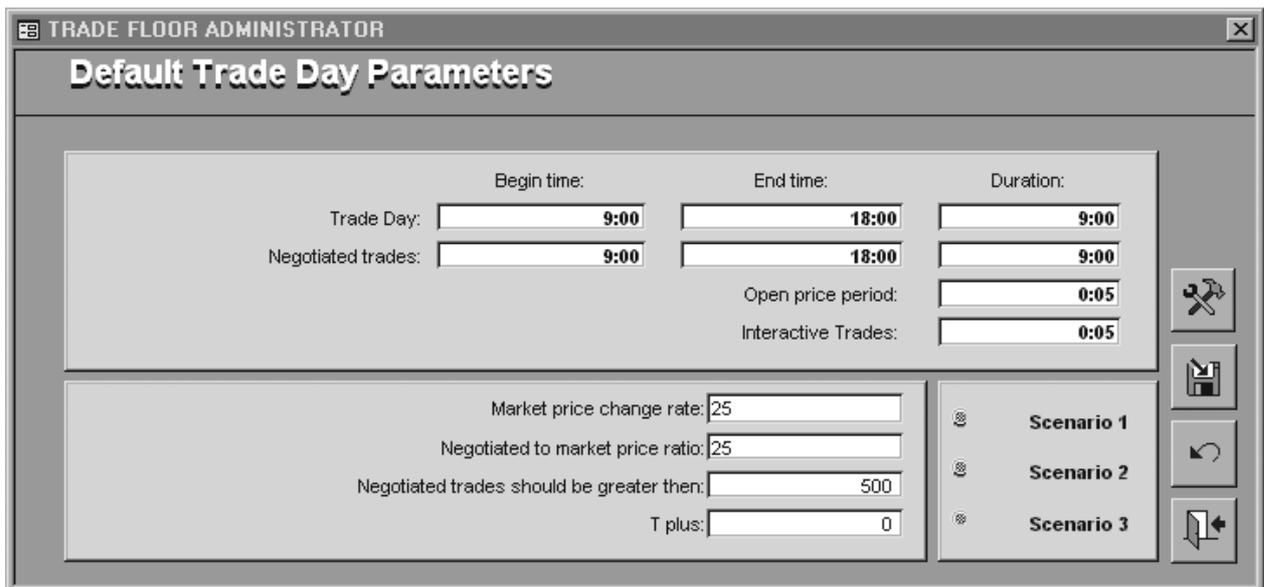
This completes the activity necessary in USDS to initiate trading. Next USTA (USAID Trading Administrator) will be run to define and start a trading session.

Defining Trade Session Parameters

Start USTA and display the main menu form. Click the **Default trade day parameters** button to enter the default trading session parameters.



This is the form that is used to establish the trading session default parameters. The data entered on this form will be used each day as default information when the trading administrator enters the Trade day parameters to start a new session.



For the purposes of this test, just enter the data as displayed in this sample. The important thing is to set the session begin time to a time before the current time so that the session will start

immediately. The **T plus** field is the settlement days which allows any number of days to be used to determine the settlement cycle. For this test, use 0 which will cause settlement to occur at the end of the day when the depository finishes processing. All of these parameters can be adjusted to fit the

needs of the installation. After completing this form click the save button,  to save the default

trading parameters, then click the close form button,  to close this form.

The main form of the USTA system will be displayed. From this form click the **Trade day parameters** button to display the form used for starting a trading session.

Date:	Begin:	End:	Begin of negotiated trades:	End of negotiated trades:	Open Price Duration:	Interactive Duration:

Settlement date :

"T plus" :

Negotiated trade should be greater than :

Limit of change market price :

Negotiated to market price ratio :

Scenario 1
 Scenario 2
 Scenario 3

Record:

From this form, click the new record button,  to display the session parameters form which will contain the defaults entered in the previous step.



TRADE FLOOR ADMINISTRATOR

Trade Day Parameters

Session date:

	Begin time:	End time:	Duration:
Trade Day:	<input type="text" value="9:00"/>	<input type="text" value="18:00"/>	<input type="text" value="9:00"/>
Negotiated trades:	<input type="text" value="9:00"/>	<input type="text" value="18:00"/>	<input type="text" value="9:00"/>

Open price period:
Interactive Trades:

Market price change rate:
Negotiated to market price ratio:
Negotiated trades should be greater than:
T plus:
Settlement date:

- Scenario 1
- Scenario 2
- Scenario 3

Navigation icons:    

Note that the T plus 0 entry has caused the settlement date to be the current date. From this form, click the save record and close form buttons as illustrated previously. This will save and close this form and return to the trading session parameters form.

TRADE FLOOR ADMINISTRATOR							
Trade day parameters							24/03/00
Date:	Begin:	End:	Begin of negotiated trades:	End of negotiated trades:	Open Price Duration:	Interactive Duration:	
24/03/00	9:00	18:00	9:00	18:00	0:05	0:05	

Settlement date :	24/03/00
"T plus" :	0
Negotiated trade should be greater then :	500
Limit of change market price :	25
Negotiated to market price ratio :	25

Scenario 1
 Scenario 2
 Scenario 3

Record: 1 of 1

At this point, the trading session parameters have been defined and a trading session is ready to be started for the current date. Now a SQL Server process has to be started that monitors and controls the trading session. Leave this form open and follow the instructions to start the trade monitor below.

Starting the SQL Server Trade Monitor

Using Query Analyzer, start a query window connected to USMSProd and execute the stored procedure: *SH_StartTimer*. This will begin a procedure that monitors the trading session and processes all activity. This process has to be running for the session to start and operate properly. After the trading session has finished, this process may be stopped by using another instance of Query Analyzer and running the stored procedure: *SH_StopTimer* or the process can be stopped from within the USTA application. Once the SH_StartTimer process is running, return to the USTA application

Starting the Trading Session

To start the trading session, from the form displayed above, click the **START** button on the form that was left open above. Next close that form and return to the USTA main menu. Click the Trade Day Status button to view the following form.

The screenshot shows the 'Trade Day Status' window with the following details:

- Title Bar:** TRADE FLOOR ADMINISTRATOR
- Main Title:** Trade Day Status
- Date/Time:** 24/03/00, 2:52:47 PM
- Trade Day:** Begin Time: 9:00, End Time: 18:00
- Negotiated Trades:** 9:00, 18:00
- Status:** Active
- Remain:** 3:07
- Open Price Period:** Closed
- Interactive Trades Period:** Closed
- Scenario:** [Empty field]
- Settlement:** [Empty field]
- Limit Orders:** Input/Edit: Closed, Trades: Closed
- Market Orders:** Closed
- NT Orders:** Active
- Buttons:** STOP, [Speaker icon]
- Message Box:** The Administrator has started the trading session
- Suspend Button:** Suspend

This form shows the status of the current trading session. It shows what cycle the trading session is in and how much time is left in the session. Also, it shows system status messages in the lower left corner. Just look at this form for now and then close it after becoming familiar with the information.

This completes the starting of a trading session. The next step is to create some broker logons and begin do some test trading to verify the system installation.

Starting USTS – USAID Trading System

In the initialization of the reference data earlier in this manual, it is assumed that two brokers from two different firms were entered onto the system. Use the Mnemocode field that was created by the system for each of those brokers to perform the following step.

Each broker/trader user of the system will have to have a SQL Server login defined on the SQL Server computer. This will be the login used to access the USTS system. Use the SQL Enterprise Manager to setup up SQL Logins for each user prior to using the trading system. These logins must match the field: Broker Mnemocode in the Brokers reference in the Depository. This field is a four character mnemonic. The first two letters are the abbreviation for the firm that the broker/trader belongs to. The last two characters are digits representing the number of the broker. This

mnemocode is generated automatically when setting up a broker in the Depository references. Use this code as the SQL Server login. Also, add these new logins to the Brokers group in SQL Server to provide the correct permissions to access data and programs. When the users have been setup, USTS can be run. It is assumed that the ODBC reattach procedure described in the USTS Installation section above has been run. If not see that section for instructions on how to do this.

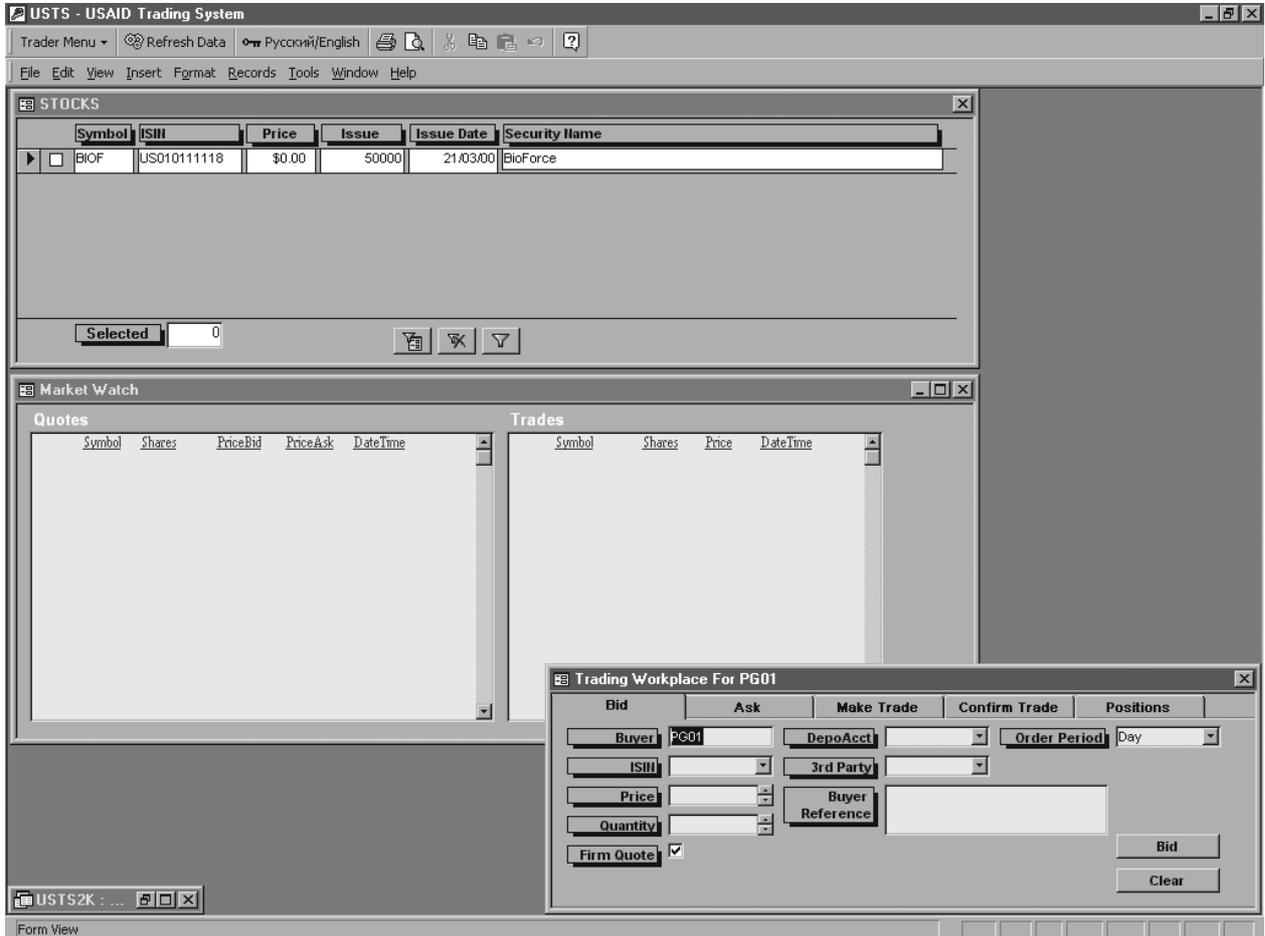
Start USTS and login as one of the broker logins that were created in SQL Server using the following screen that will appear when **Start Work** is selected from the **Trader Menu** on the toolbar.



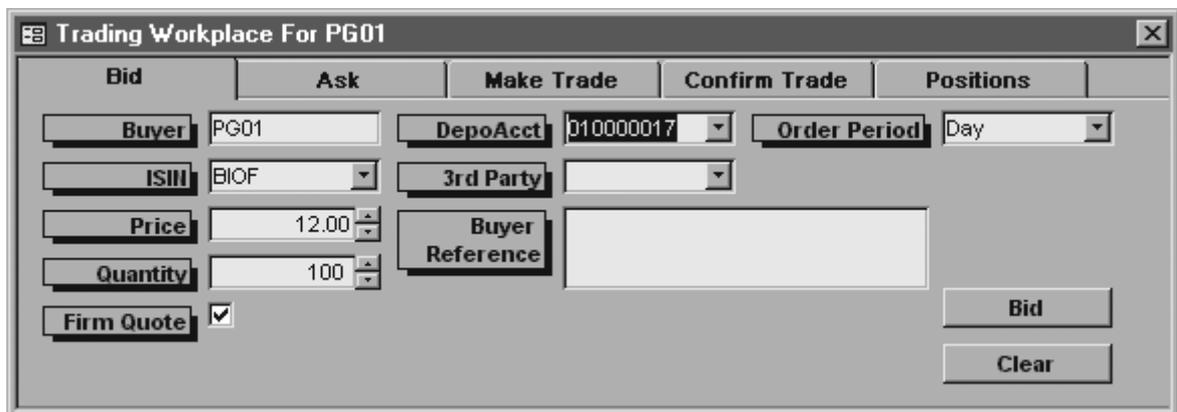
Enter the Login and password (if any) and click the **Enter** button. The USTS main window will open providing access to USMS for trading. Congratulations!

Entering the First Orders & Trades

This is the main form of USTS. To complete the installation and verification of the USMS system some orders and trades have to be entered to test the functionality of the system.



Use the Trading Workplace form at the lower right corner of this screen to enter a bid for the first broker.



To successfully complete this form, select an ISIN to bid on, key in a price and quantity, click the arrow to the right of DepoAcct to select a depository account and allow the rest of the information to default. Click the **Bid** button and **OK** on the confirm dialog to place this bid onto the system.

Entering an Ask is the same process just click the **Ask** portion of the **Trader Workplace** form. the offer will be displayed in the **Market Watch** form. Use the **Stop Work** command from the **Trader Menu** on the toolbar to exit the application. Then restart the application and login as another broker to match the offer that was previously entered.

When USTS is restarted with a different broker login the Market Watch window will show the bid order.

Quotes					Trades				
Symbol	Shares	PriceBid	PriceAsk	DateTime	Symbol	Shares	Price	DateTime	
BIOF	150	12.12		15:50 24/03	BIOF	100	12.00	15:50 24/03	
					BIOF	0	12.00	15:49 24/03	
					BIOF	100	12.00	15:46 24/03	

For the purposes of this test, simply click on the **Symbol** field of the Bid in the **Market Watch** window to manually match the order and make a trade. The information is brought into the **Trader Workplace** form on the **Make Trade** tab.

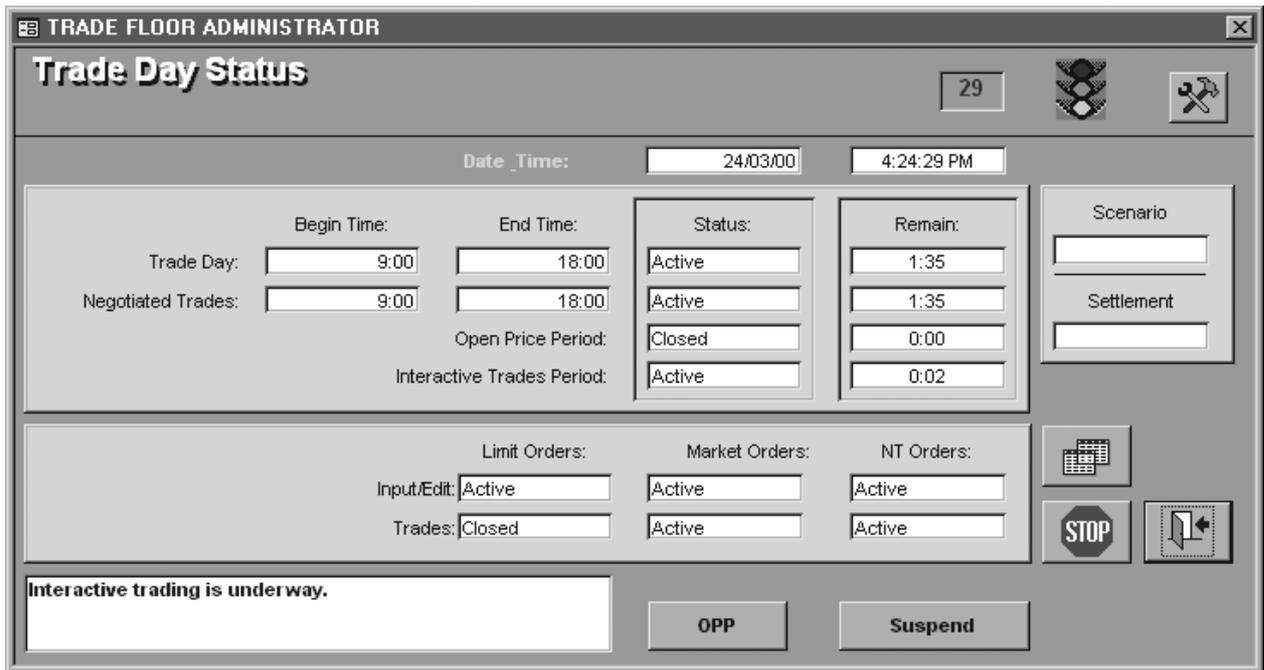
Bid	Ask	Make Trade	Confirm Trade	Positions
Seller	US01	ISIN	BIOF	Seller Reference
Price	12.12	Quantity	150	Buyer Reference
Seller Fees	0.00	DepoAcct	010000025	Make Trade
Buyer Fees	0.00	3rd Party		Clear

To complete the information needed for the trade select a depository account from the DepoAcct list box. Then click the **Make Trade** button and answer the confirmation with **OK** to make the

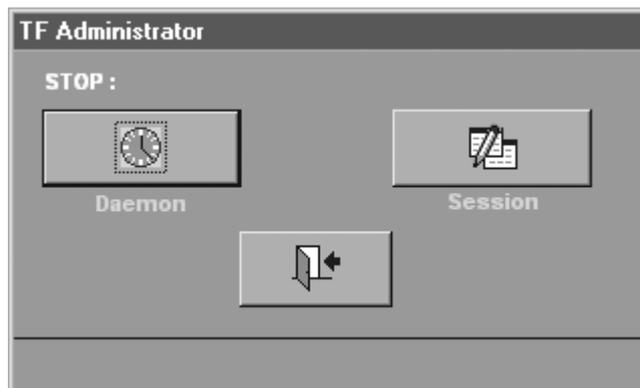
trade. The result will be displayed in the **Trades** window of the **Market Watch** form. Exit USTS now. Congratulations, the first trade has been made on the this new installation of USMS!

Stopping the Trading Session

Restart USTA and from the main menu click the **Trade Day Status** button to display the session status form.

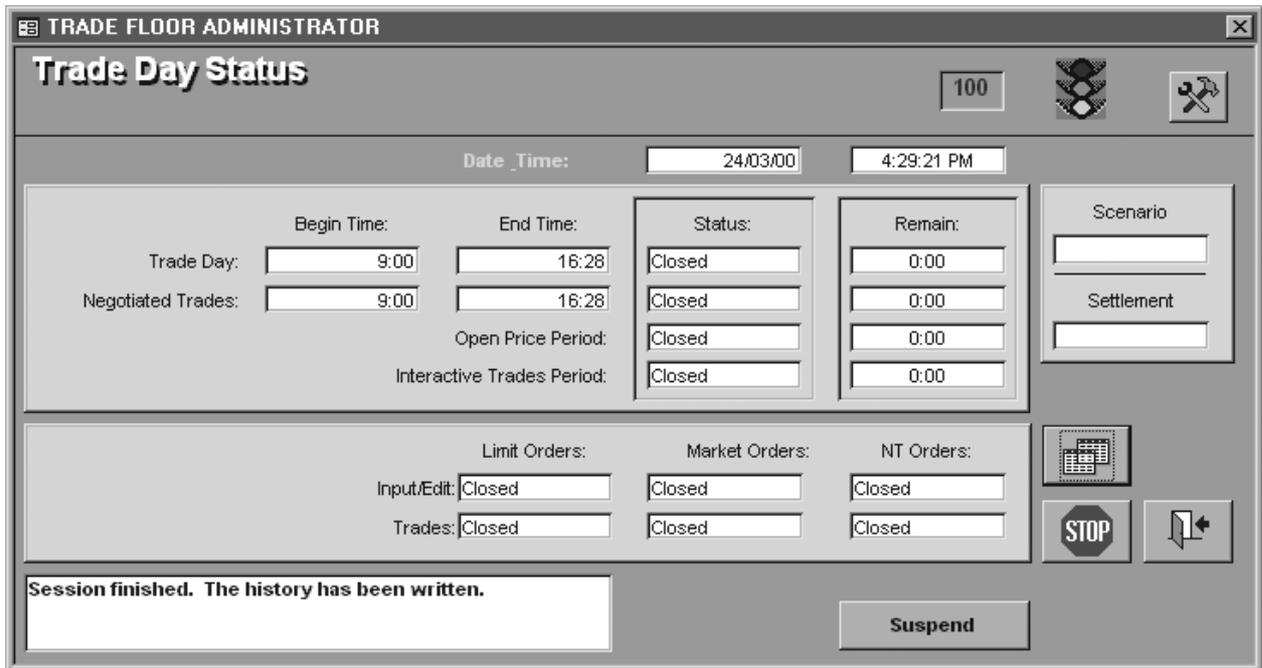


On this form click the **STOP** button to end the session. Answer the confirmation **OK** and the following dialog box will be displayed.



This dialog allows the stopping of the trading session and the SQL Server Trade Monitor process. Click the **Session** button first to stop the trading session. This process will take a few moments or a minute or two as the system performs and orderly shutdown of the trading process. By observing the trade status window and clicking on the refresh button, the **Trade Day Status** form should

display the status of 100 and the message in the lower left system box of *“Session Finished. The history has been written.”* This is an example of what that looks like.



Repeat the STOP process and click the Daemon button to stop the SQL Server Trade Monitor process. After that, exit the USTA application and close the Query Analyzer window that was running the Trade Monitor without saving the changes.

Running Depository Clearing & Settlement

Start the USDS application and click the **Clearing/Settling System** tab to display this form.

Clearing and settlement is run by clicking each button on the left side of this form in sequence. Begin this process by clicking the **Accept trading system information** button and answering Yes and OK to confirmation dialogs. Repeat this process for the two settlement statement buttons in order and for the **Report to Clearing Bank (Due To)** button. Next, click on the **Bank Statement Processing** button. This will show the following window used to confirm that cash is available for settlement in the bank accounts of the participants.

Transfer number	Firm Name	Bank Account #	Change of amount in the	Payment Confirmation
1	Pragma Traders	321	\$618.00	<input checked="" type="checkbox"/>

Record: 1 of 1

No action is required other than to view this information. Then click the exit form button at the bottom right corner of the form to close this form. Answer the confirmation dialog **Yes**. Then click the **Settling Trades** button to complete the clearing and settlement process. Answer it's confirmation **Yes** and the process is finished.

The final process in verifying the trade results is to print the *Shares Transaction Report for Period* showing that the trades actually transferred shares. Click the Reports tab on the USDS main form to display the reporting menu. Click Page 2 tab to display the set of reports required.

The screenshot shows the 'Depository Menu' application window. At the top left is a logo of a globe. To its right is a 'Depository Date' section with a table:

Depository Date	
24/03/00	17:02
xxx	5

On the far right are four icons: a key, a lock, a folder, and a refresh arrow. Below this is a navigation bar with tabs: 'Depository System', 'Clearing/Settling System', 'Reports', 'Open/close day', and 'References'. The 'Reports' tab is active, showing a 'Reports' header. Below the header, there is a 'Depository Date' field with the value '24/03/00'. To the left of this field are two buttons: 'Change Reporting Date' (with subtext 'Reports marked in blue use date parameters') and 'Reset reporting date'. To the right of the 'Reset reporting date' button is a checked 'View' checkbox. On the right side of the window, there are three page tabs: 'Page N° 1', 'Page N° 2', and 'Page N° 3'. Below these tabs are four report buttons: 'Securities list', 'Securities list', 'Shares Transactions Report For Period', and 'Accounts Activity Report'.

On this form click the **Shares Transactions Report for Period** button to run the report. A reporting date dialog box will appear.

The screenshot shows a 'Select Period' dialog box. It has a title bar 'Select Period' and a main area with the following elements:

- A 'Period' label centered at the top.
- 'From' and 'To' labels with date input fields. The 'From' field contains '24/03/2000' and the 'To' field contains '25/03/2000'.
- A checked 'View' checkbox below the date fields.
- Three buttons at the bottom: 'Calendar', 'Start', and a refresh arrow icon.

Adjust the **To** date field to be the day after the trading activity took place then click the **Start** button to display the following report.



Closed Joint Stock Company " Central Depository"

Shares Transactions Report For Period

For the period fr 24/03/00 till : 25/03/00

USD10111118	BIOF	Nominal:	\$13.00	
BioForce				
	Account from	Account to	Amount	Closing Date and time
CT	010000017 ->	010000025	100	24/03/00
CT	010000017 ->	010000017	100	24/03/00
CT	010000025 ->	010000017	150	24/03/00

This report shows the transactions that took place as a result of trading activity. This particular report shows that three trades occurred and the accounts that the shares were transferred to and from. Compare this data with the data that was entered when making a trade to verify results.

Exit the date dialog and return to the USDS main menu form. From there select the Open/Close Day tab to display the following form.

The screenshot shows a software window titled "Depository Menu". At the top left is a logo of a globe. To its right is a "Depository Date" section with input fields for "24/03/00", "17:11", "xxx", and "5". On the far right are four icons: a key, a lock, a folder, and a refresh arrow. Below this is a menu bar with tabs: "Depository System", "Clearing/Settling System", "Reports", "Open/close day", and "References". The "Open/close day" tab is selected, displaying a large "Open/Close Day" title. Below the title are two buttons: "Open Day" (with subtext "Operations to Begin Day") and "Close Day" (with subtext "Operations to Close Day"). At the bottom is a button labeled "Transfer positions to the Trading System".

Click on the Close Day button to finish the depository processing of the day's trade results and other operations. This completes the installation of the USMS system and a test of the installation. This process can be repeated when production data is entered. It can also serve as a basic guide to running the system.

USBW Installation Instructions

It is necessary to install Windows NT 4.0 Option Pack for “USBW” running. Internet Information Server (IIS) -WWW Server has to be running.

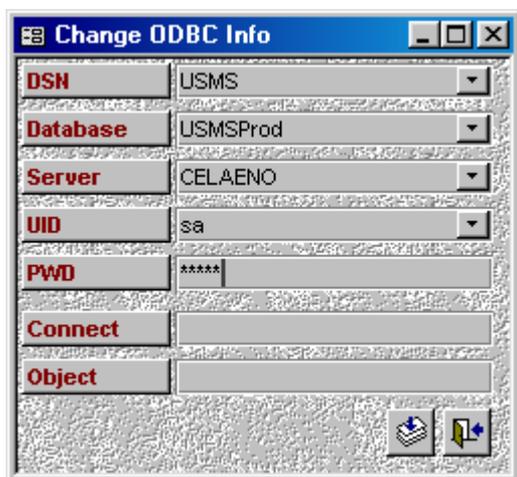
Installation process

1. Create the new directory in [\\InetPub\wwwroot](#) , for example: “USMSWeb”
2. Copy all files from the USMS installation CD-ROM that are located in the directory **|Client Programs|USBW** to the newly created directory
3. In “Internet Service Manager” for “Default WEB site” create the new virtual directory
 - Enter the alias to be used to access virtual directory, for example: “USMSWeb”
 - Enter the physical path of the directory containing the content to be published - `\\InetPub\wwwroot\USMSWeb`
 - Give the permission for Read and Script
4. Open the “Property” window for this created virtual directory and in “Document” window enter the name of the Default document – it is “Default.asp” for USBW

The “USBW” system has been designed as bilingual system (Russian and English) There are tables in Data Base used for setting up the chosen language and for initialisation the system parameters. In order to insert the data in these table it us necessary to:

- Open the Microsoft Access data base “WEBTables.mdb”

This is the form for creation (editing) the ODBC connection and exporting data from MS Access DB to SQL Server DB.



The information to be entered is:

- DSN –any name that will be used as DSN name (for example “USMS”)
 - Database – name of the SQL Server Data Base
 - Server – server name
 - UID – “sa” –the SQL Server login name
 - PWD – SQL Server password (optional parameter)
- Change the parameters in “global.asp” file (directory “USMSWeb”)

```
Set ProdDCS = Server.CreateObject("ADODB.Connection")
```

```
ProdDCS.ConnectionTimeout = 10
```

```
ProdDCS.CommandTimeout = 10
```

```
ProdDCS.Provider="SQLOLEDB"
```

```
ProdDCS.Open "Network Library=DBMSSOCN; Data Source=Celaeno;
```

```
Workstation ID=USMSWEB; Application Name=GLOBAL.ASA;
```

```
Initial Catalog=USMSProd; Network Address=192.168.0.39;
```

```
Persist Security Info=True", Application("UserName"), Application("Password")
```

The parameters to be changed are:

- Data Source – the name of SQL server (for example: “Celaeno”)
- Initial Catalog – the SQL Data Base name (for example: “USMSProd”)
- Network Address – SQL Server IP address (for example: “192.168.0.39”)

The default system parameters are:

- *Application("Country")="KG"* - set the default country code to “KG” (SQL DB table “States”)

- *Application("RegistryAccount")=2* - set the default registry Account type to 2(SQL DB table "WEB_RegistryAccountTypes" – "Shareholder Account")
- *Application("LanguageID")=1* – set the default language to English
- *Application("UserName")="WEBLogin"* –set the User name (SQL Data Base user)
- *Application("Password")=""* – set the user password(optional parameter)
- Change the parameters in "logon.asp" file (directory "USMSWeb")

```
Set ProdDCS = Server.CreateObject("ADODB.Connection") ProdDCS.Provider="SQLOLEDB"  
Session("ConnectionString") = "Network Library=DBMSSOCN;
```

```
Data Source=Celaeno;Workstation ID=USMSWEB;
```

```
Application Name=LOGON;Initial Catalog=USMSProd;
```

```
Network Address=192.168.0.39;Persist Security Info=True"
```

```
Session("ConnectionString") = "Network Library=DBMSSOCN;
```

```
Data Source=Celaeno;Workstation ID=USMSWEB;
```

```
Application Name=" & TRIM(Request.ServerVariables("REMOTE_ADDR")) & ";
```

```
Initial Catalog=USMSProd; Network Address=192.168.0.39;Persist Security Info=True"
```

The parameters to be changed are:

- Data Source – the name of SQL server (for example: "Celaeno")
- Initial Catalog – the SQL Data Base name (for example: "USMSProd")
- Network Address – SQL Server IP address (for example: "192.168.0.39")

To start the "USBW" it is necessary to enter broker's name and password in "Logon" screen. They are the same as broker's user name and password for the "USTS" system (SQL DB table "BrPassword")

Additional notes:

- One item in USBW menu ("QuoteStats") will be available only after at least one trade and order has been entered in the system.
- If some problems occurs (for example: new security doesn't appear in "combobox") it is necessary to open "grobal.asp", enter empty string and save it again

**This marks the end of the
USMS Installation Manual**