



IBM Software Group

## ***IBM WebSphere® Data Interchange V3.3***

### ***Using Export / Import to deploy objects***



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This presentation will review the WebSphere Data Interchange Version 3.3 Export Import subsystem and how it can be used in deploying objects from test to production systems.

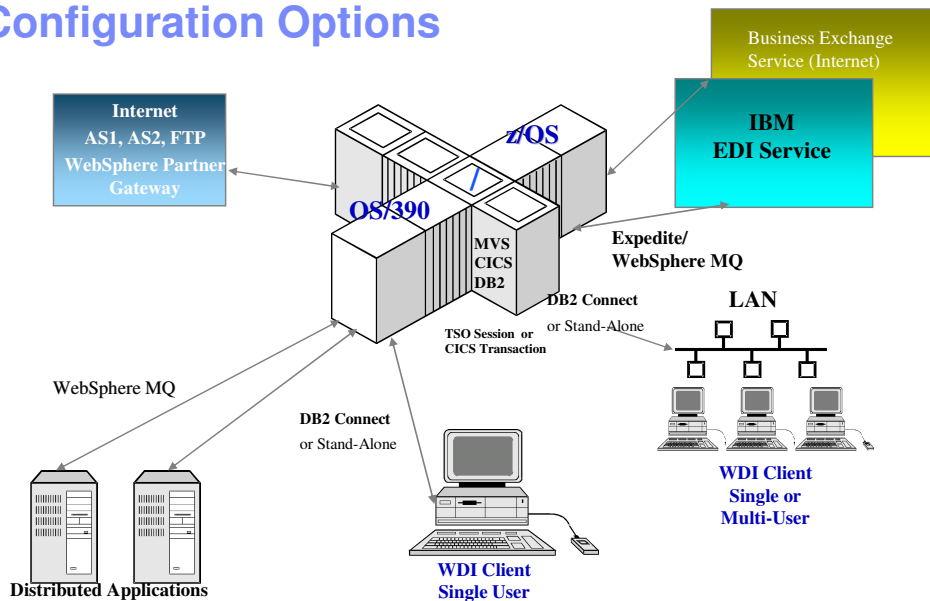
## Agenda

- **Typical Operational Environment**
- **Export / Import Overview**
- **WDI Deployment Techniques**
- **Client Export flow**
- **Client Import Flow**
- **Summary**



Topics to be discussed are  
Typical Operational Environment  
Export / Import Overview  
WDI Deployment Techniques  
Client Export flow  
Client Import Flow  
Summary

# Configuration Options



WebSphere Data Interchange (WDI) OS/390 and z/OS environment. A test and production environment is recommended for WDI.

## Typical Operational Environment

- **Most installations configure two WDI systems**
  - Development or Test
  - Production
- **Some installations configure three systems**
  - Development
  - Quality Assurance
  - Production



Most installations have at least two WDI systems deployed. One is for Development or Test, and the second is the production or operational system. The Test system is used to create new maps and test usages, etc. The production system is used for live data. Objects such as map control strings, trading partner profiles, and map usages are moved or deployed from Test to Production when things are performing as desired.

Some installations use a three system approach. In this configuration, developers create objects and do unit tests in the Development system. Objects are then promoted to a Quality Assurance / Quality Control region which mimics the Production region. This allows a formal test group to verify development changes with live data in a duplicate environment before changes are promoted to production.

Sometimes only operational objects are in the production system. This would include Trading Partner Profiles and Map control strings, but not the Maps, EDI Standards, or Data Formats themselves. This technique assures that changes cannot be made without going through a formal “promotion” / acceptance procedure.

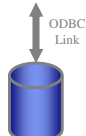
## Typical Two System Configuration

### Client / Server mode

& Local DB

WDI  
Client

(1 or more)



Client/Server  
ODBC  
LINK

On PC or Server

DB2 Connect P.E. v7.2

Middleware  
Link

Test / Production

WDI Server

DB2  
WDI  
Database

Windows 2000, AIX, z/OS

Different DBs can be setup,  
Development system (local)  
Test system (client/server)  
Production system (client/server)

A local DB may also be used for a stand-alone development system. Maps, profiles, and other objects can be exported from the 'local' system to the client/server systems using 'export to system'.

## Export / Import Overview

- Export / Import allows a WebSphere Data Interchange user to extract data from, or insert data into WebSphere Data Interchange tables in a batch mode.
- The format of the data is proprietary.
- WebSphere Data Interchange allows 3 basic formats for data
  - tagged,
  - fixed, and
  - comma delimited.
  - "native" - dropped in WebSphere Data Interchange v3.2.
- Export / Import service invoked using
  - PERFORM EXPORT ...
  - PERFORM IMPORT ...
- Data conversion from and to E/I formats is "table-driven"



The Export / Import subsystem allows a WebSphere Data Interchange user to extract data from WebSphere Data Interchange tables, or insert data into WebSphere Data Interchange tables in a batch mode. The structure of the Export Import records is such that they are independent of WebSphere Data Interchange version, and they convert the DB2 data into a format that can be handled and viewed easily.

The format of the data is proprietary. WebSphere Data Interchange allows 3 basic formats for data. Tagged, fixed, and comma delimited. Older versions use a format called "native", but was dropped in WebSphere Data Interchange v3.2.

The Export / Import service is available from the Utility using, PERFORM EXPORT ... or PERFORM IMPORT ...

Data conversion from and to Export Import formats is done by the Structure-to-structure (STS) service, and hence is "table-driven", using the WebSphere Data Interchange Format service and definitions in EDIRDEF H and EDIFDEF H

## Export / Import Overview

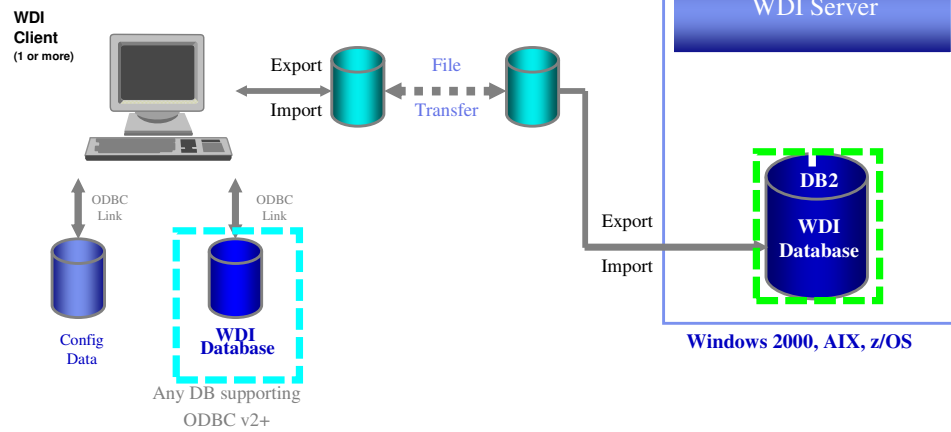
- Tagged format is a keyword format, like XML
  - TPNICKN(IBMHRS),
    - where TPNICKN is the Tag and IBMHRS is the data
    - Fields are optional in Tagged format
- Fixed format is a static record format
  - Layouts including field order and sizes are described in the WebSphere Data Interchange Programmers Reference



Tagged format is a keyword format, like XML data is presented as TPNICKN(IBMHRS), where TPNICKN is the tag and IBMHRS is the data. Fields are optional in tagged format. Fixed format is a static record format. Layouts including field order and sizes are described in the WebSphere Data Interchange Programmers Reference.

## Standalone Configuration

### Stand-Alone mode



Standalone requires data to be exported from WDI Client, transferred to the server and imported to WDI Server. Import/Export are functions provided with WDI.



## WDI Deployment Techniques

- Batch transfer using command files / JCL
  - Export to File from Client
  - Batch Export
  - Import using Client
  - Batch Import
  
- Export to Other system
  - Interactive technique
  - Security and Control issue

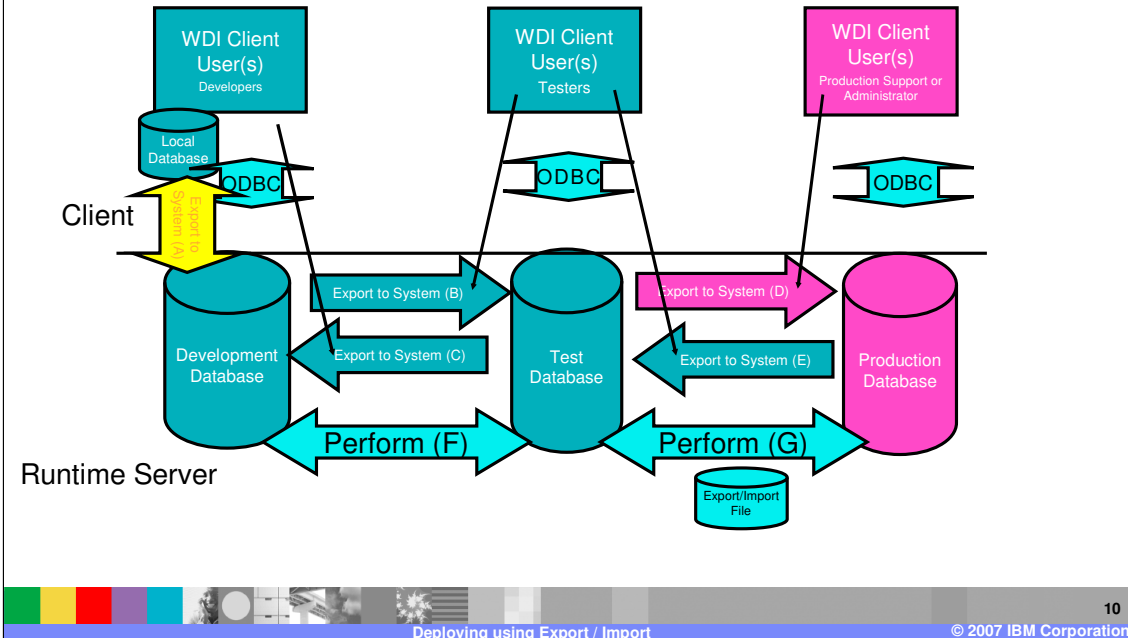


The promotion of WDI objects from Test to Production can be handled using either of two features of WDI. The first feature is a batch JCL or command file technique. In this technique, the export / import subsystem allows the user to execute batch PERFORM EXPORT commands and the export control file to extract specific WDI objects from the database to a flat file. The Client Export to File function also does the same thing. The PERFORM IMPORT command formats and stores flat file data in WDI E/I format to the WDI database. Data can then be exported from Test and imported into production.

The second feature is the Client Export to other system function. This GUI function allows the selection and transfer of WDI objects from one system defined to the Client to another system – that is, from Test to Production, or QA to Production. The client user must be authorized to access the selected databases and the databases must be defined to the client.

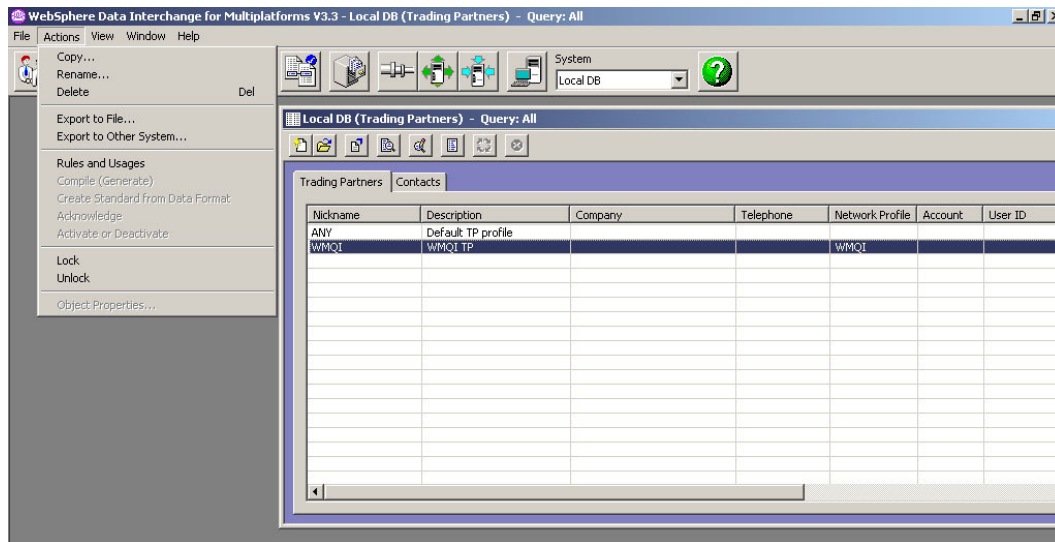
With the security and audit trail features of WDI 3.3 both techniques provide a trail of changes and the ability to control access to the functions.

# Three System Deployment



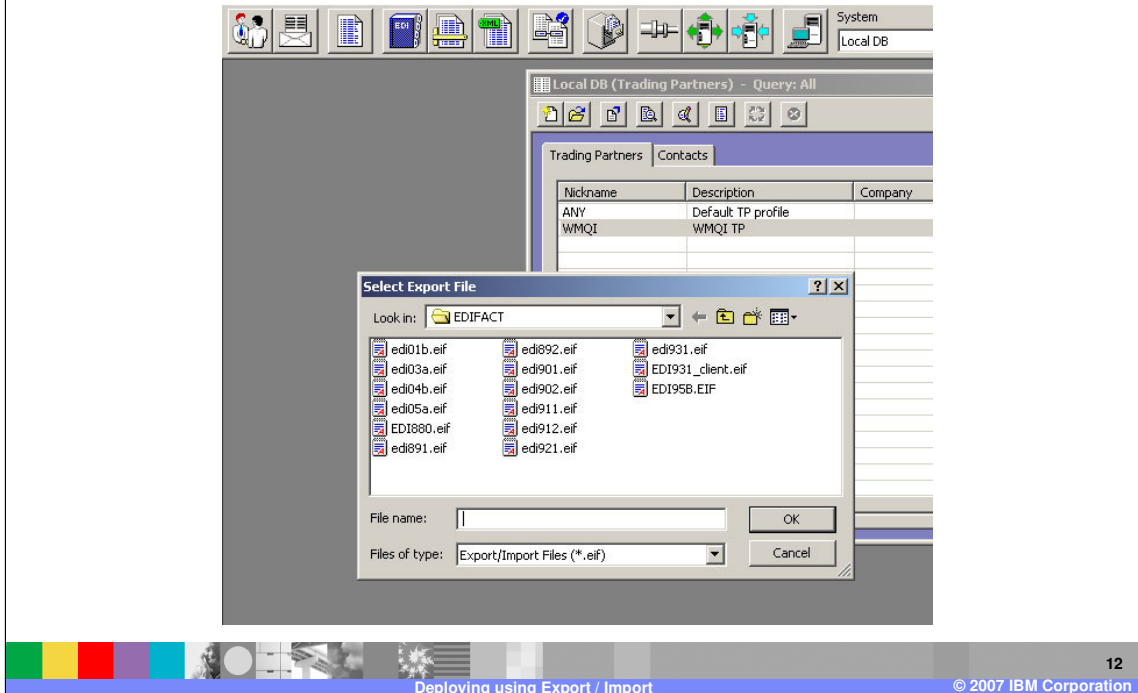
The configuration shown combines elements of a source code control system with a rigidly managed deployment process for changes in a multiple translation server environment. This configuration uses both PC and server databases. It makes extensive use of client/server access, along with the Export to System function within WebSphere Data Interchange Client to move objects, such as Trading Partner Profiles, Maps and DTDs, from system to system.

## Exporting Objects



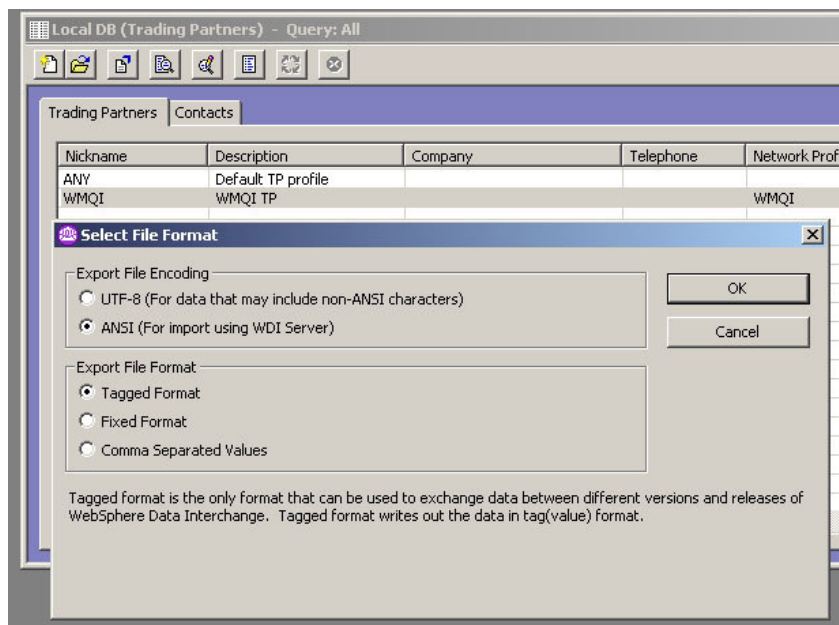
After an object or objects are selected, the File Menu is used to select either the “Export to File” option or “Export to Other System” option. The “System” value on the menu bar shows the database from which data will be exported.

## Exporting Objects



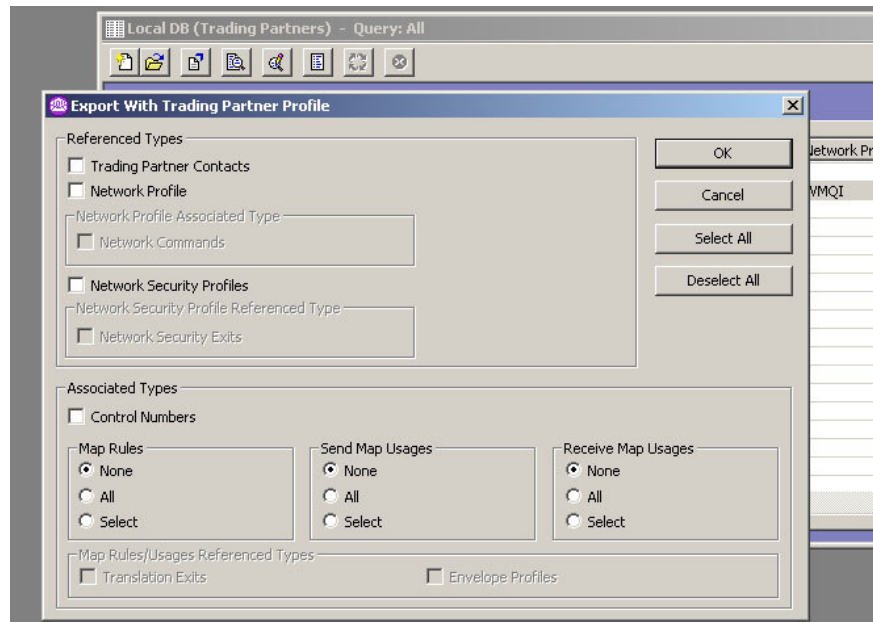
The file into which to write the data to be export can be specified.

## Exporting Objects



When creating an export file, the format of the export data is determined. Most files are tagged, but fixed file export can be used to interface with user applications or comma delimited format can be used for vendor supplied software.

## Exporting Objects



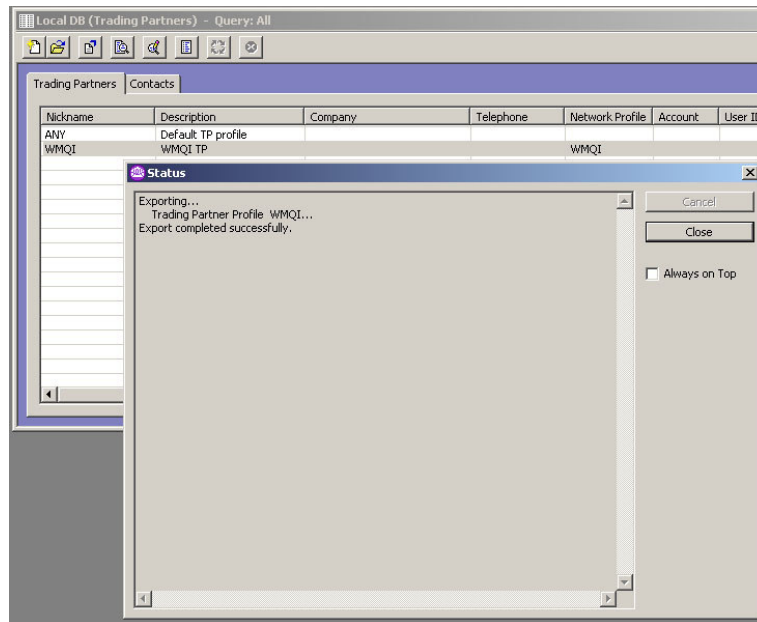
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Deploying using Export / Import

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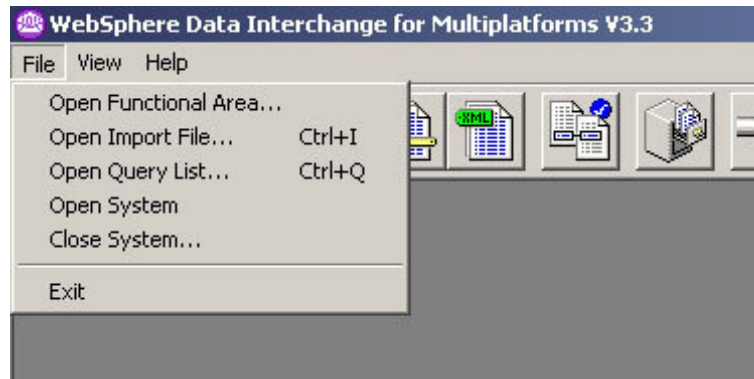
Most objects have an option screen to identify related objects to be exported.

## Exporting Objects



The completion status for the export is displayed in the status window,

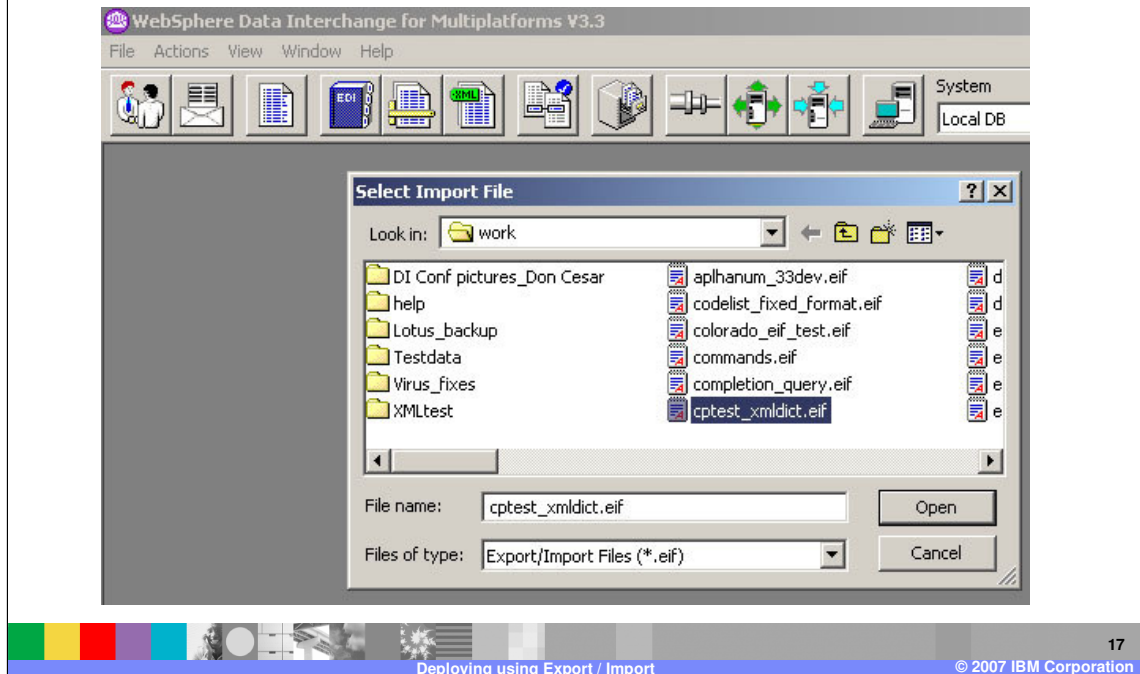
## Importing Objects



The File Menu has the “Open Import File” option.

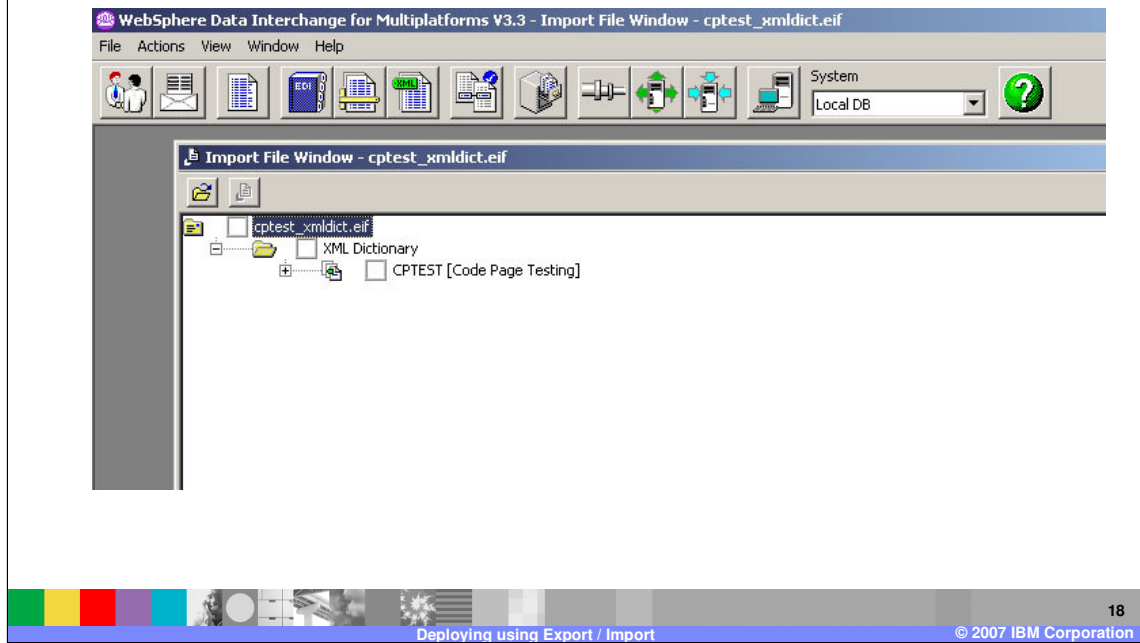


## Importing Objects



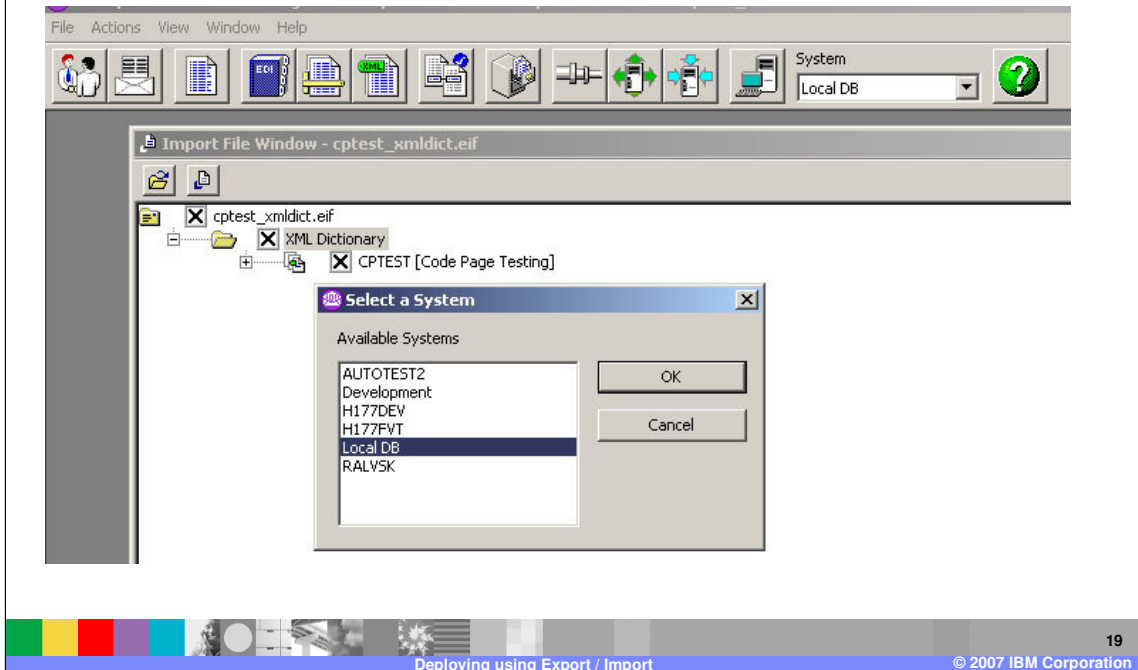
Select the import file to be opened.

## Importing Objects



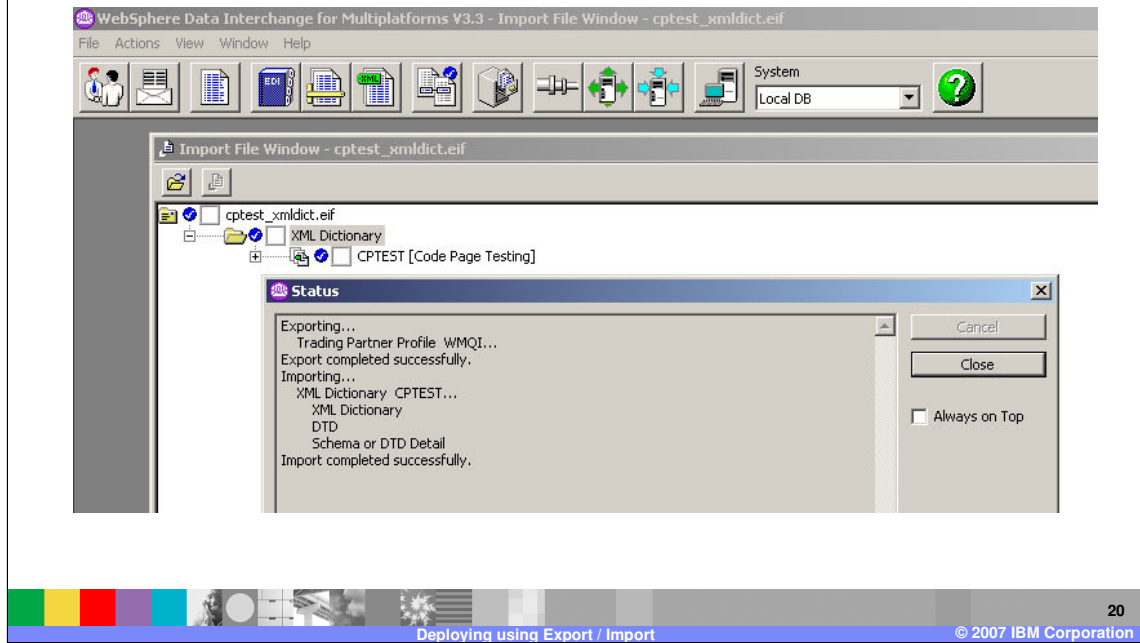
Data objects in the import file are listed.

## Importing Objects



The database into which data is to be inserted can be selected.

## Importing Objects



The status screen is shown at completion.

## Summary

- **Deployment technique depends on**
  - Operational Configuration
  - Corporate Control and Security procedures



WDI provides a couple of functions for allowing customers to deploy test objects into production. The procedures used depend on the operational configurations determined by the corporation and the Control and Security administrative procedures of the enterprise.

Deployment can be handled interactively or on a delayed basis using automated batch scheduling systems and WDI batch techniques.

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