

CHAPTER 22

Document Management

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Document Management

The ERP2020 provides the user the facility to completely manage supporting documents. These documents may include local and remote soft documents and/or physical documents. The interface to move and scan-and-move documents is fully self-contained. 'Soft' documents retain their type, while scanned documents are automatically converted to PDF documents. All documents are stored on a separate Web Server (Document Server) and their association with ERP2020 tables and records is seamless. In addition, the ERP2020 maintains a 'Document-Index-Table' for all documents that it transfers to the Document Server.

The Document-Index-Table categorizes documents by their 'type'. Types include data-logs, test-summaries, RFQs etc. The Type-List is controlled by the Administrator, via the List Management Interface. When storing the documents on the remote-server the ERP2020 stores them in a hierarchical tree that mirrors the ERP2020 table structure. The file-names are also coded to reflect their association with ERP2020 tables and records. In addition documents are embedded with meta-data tags to allow automatic verification of the tree integrity.

The document Management option requires a QPIX plug-in and a "Document Management" record in the MISCDATA table. The Client Workstation must also have installed the following:

- 1) QuickTime release 6.0 or higher. QPIX plug-in does not work on windows NT. It needs Windows 2000 or higher.
- 2) pdftk.exe must be installed in the Windows/System folder

Configuration

During the initial setup the user must first define the document-server storage and retrieval methodology, the Document-Server URL, FTP account information, etc. Setup of the MISCDATA record is shown below in Figure 22.1 on page 22.3.

The screenshot shows a configuration window with the following fields and values:

- STR_ID: -999
- Name: DocumentManagement
- Customer: (empty)
- Volume/URL: HTTP://ERP2020.COM/SEMILABSDOCS
- Mode {Local} {FTP}: ftp
- FTP Host: erp2020.com
- User Name: SEMILABSDOCS
- Password: SEMILABSDOCS
- Buttons: Get Printer List, Error check, X, checkmark
- Checkbox: Void

FIGURE 22.1

Document Management Configuration-Record Fields

Volume / URL

This field will define the root URL of the WEB-Server where the documents are stored. This URL must define the full path to the root folder. e.g. "Http://erp2020.com/SemilabsDocs". To facilitate automatic transfer of files to the WEB server the root directory of the FTP user-account must be included with the URL. In the foregoing example "SemilabsDocs" is the default directory for the FTP account that must be specified with the URL. During the retrieval process if no URL is

defined then in the FTP mode the files will be download to the local disk of the client. See Table 3 on page 2.22.14. Also note that if the documents will be served by the web-server then the user must assure that the default FTP directory defined for the account is a sub-directory to the default-path of the web-server, otherwise the Web-Server may not publish the document for security reasons.

Mode {FTP}	This field must be set to “FTP” to specify the storage and retrieval method.
FTP Host	Name of the FTP Host Server. Note that both the FTP and WEB-Server must exist on the same machine.
User Name	User account Name on the FTP Host Server.
Password	User password on the FTP Host Server.

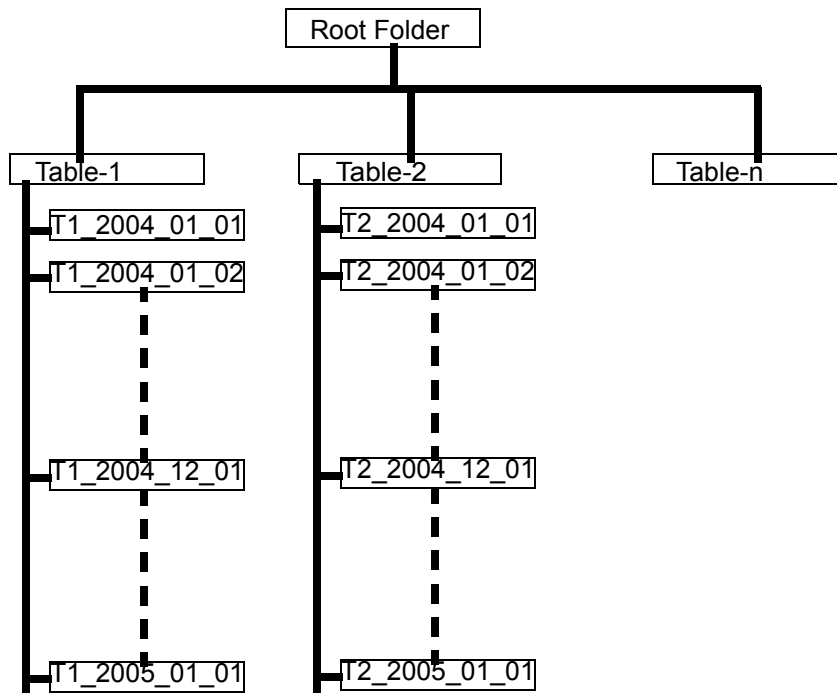


Note: If WebStar (Mac Web-Server) is being used as the Web and FTP Server, the owner of the root-folder must correspond to the default-owner of webstar ('webstar' by default and the permission must be set to read/write)

Document Storage Hierarchy

Document management requires the implementation of an a manageable hierarchy, so that scanned documents or other local or remote soft-documents are filed away in meaningful tree without accumulating too many documents in the same folder and at the same time without creating an unreasonable amount of levels in the tree. When a document is scanned it is first read into a folder called "LocalVolume\ERP2020Scan". From here the scanned image-file is post processed and then via FTP it is transferred to the document-server.

The hierarchical scheme used on the Remote Server is illustrated below:



The naming convention for the scanned document is as follows:

Source	File name	Notes
Scanned Document	<i>Tn_Primary-key value_Type+Counter.pdf</i>	<p>Where "<u>n</u>" is the ERP2020 Table-Number</p> <p><u>Primary-key-value</u> is the identifier of the ERP2020 record with which the data is being saved</p> <p><u>Type</u> is the document category (from the Document Type List) defined by the user at the beginning of the Scanning Process. <u>See "Document Scan Interface" on page 2-22.10.</u></p> <p><u>Counter</u> is the next available sequence-number to make the document-name unique. E.g.> if file-name T12_ABC_DL1 exists then the new file will be given the name T12_ABC_DL2</p>
Soft Document	<i>Tn_Primary-key value_DiskFilename</i>	<u>DiskFilename</u> is the name of the file being scanned from a volume to the Document Server

TABLE 1.

Level	
0	This is the root-level as defined in the MISCDATA record. The destination of the scanned document will be determined by the ERP2020 table of the reference-record which is initiating the scanning operation.
1	This level contains one folder for each ERP2020 table. The folders are named T1 for table 1, T2 for table 2 etc. The folders will be created when necessary (i.e. as dictated by the table-number of the ERP2020 reference-record)
2	This level will contain a folder per day. One folder for each day of the year. The folders will be created when necessary. The scanned documents will be placed in the day corresponding to the day the ERP2020 reference record was created.
3	Optional third-level folder for each hour of the day. The scanned documents will be placed in the day and hour corresponding to the day and time the ERP2020 reference record was created.

TABLE 2.

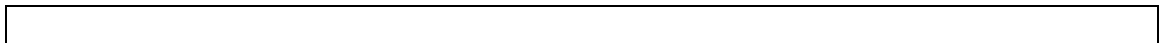


FIGURE 22.2

Access to the document server is facilitated via the wo icons shown below:

Documents are uploaded to the document server via the “Folder” icon. Documents are retrieved from



the document-server via the “paper-clip icon. These icons will appear in forms for tables which allow linking of external documents to records. When the folder icon is clicked, the following diagram shown in Figure 22.3 on page 22.8, allows the user to upload a local document, a remote document or scan and upload a document to the document-server.

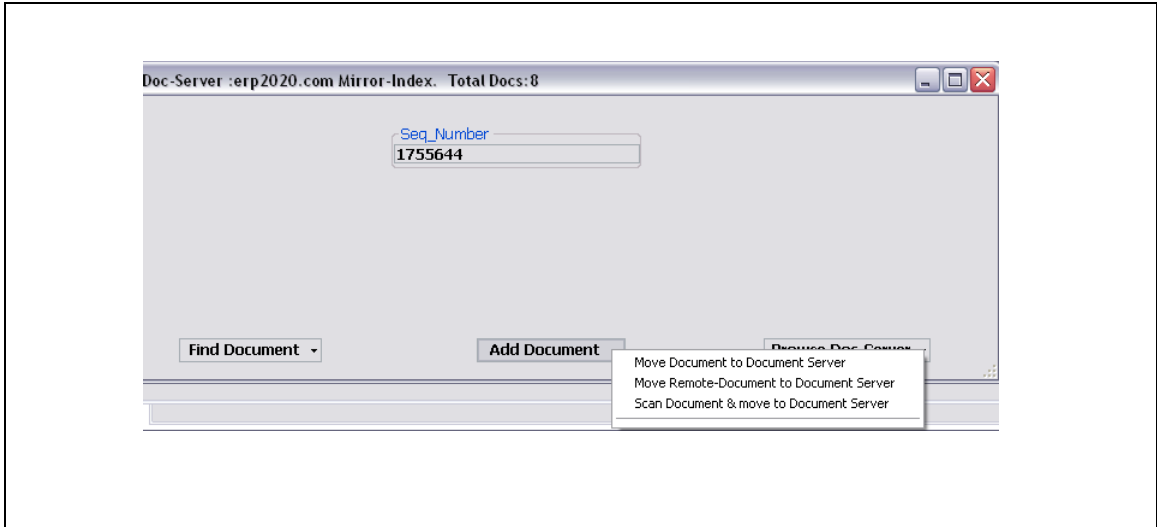


FIGURE 22.3

Uploading documents from Document-Server

The “Add-Document” button allows the user to upload a document to the document-server. The menus associated with this button are discussed below:

Move Document to Document Server

This menu item allows a user to move a file (document) from the local computer to the Document Server. The file-selection dialog allows the user to select the file to move.

Move Remote-Docment to Document Server

This menu item allows a user to move a remote-file (document stored on an FTP site) from the remote-site to the Document Server. The built-in FTP facility allows the user to select the file to move to the document-server. Application examples are moving of data-logs and

tester summaries from the Tester to the Document Server. See "Remote FTP Interface" on page 2-22.11.

Scan Document and move to Document Server

This menu-item allows the user to choose an available TWAIN device, scan a document, then move and file it in the Document Server. Multiple pages may be scanned via a document-feeder and combined into a single image. All scanned documents are converted into PDF documents. Meta-Data tags are also added to the PDF documents before they are sent to the Document-Server.

Retrieval of documents from Document-Server

Get Documents from Document Server

This menu-item provides a list of all documents that have been scanned and associated with the **selected** record. All other files in the same folder on the document-server are suppressed. See "Document Retrieval" below

Hierarchical Display by Level

This menu item allows the user to browse the entire content of the Document-Server via a hierarchical-directory-list interface

Hierarchical for Single Table

This menu item allows the user to browse the entire content of the Document-Server via a hierarchical-directory-list interface. Only the folders pertaining to the current table will be displayed.

Document Scan Interface

When a document is being scanned, the ERP2020 will first connect to the Document Server and retrieve the directory list of the target (destination) directory. If the FTP access has been successful, then the user is presented the Scan Dialog shown below

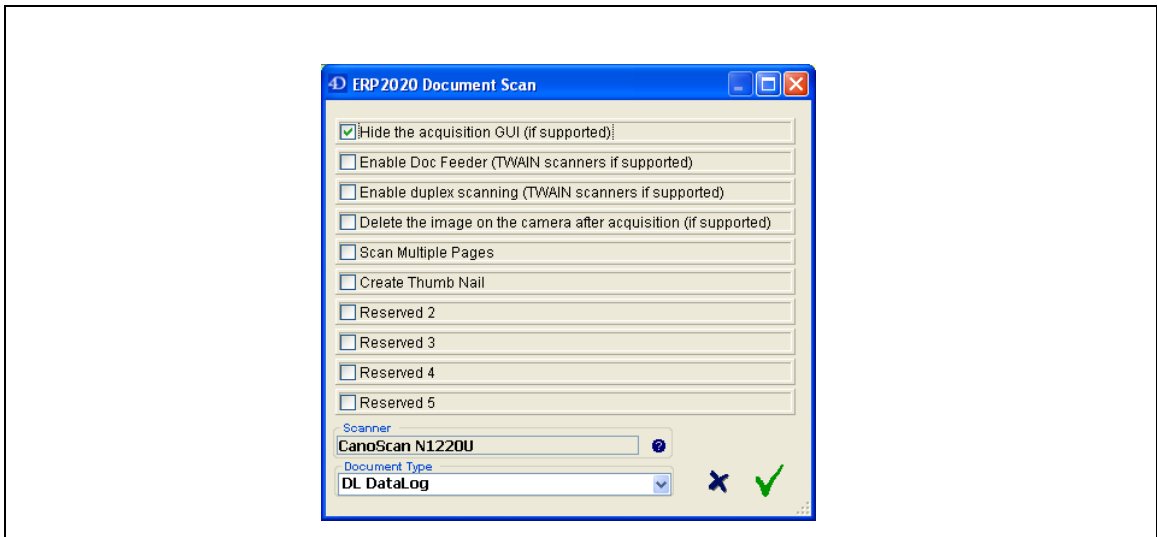


FIGURE 22.4

Hide Acquisition GUI	This option will suppress the acquisition GUI of the selected scanner.
Enable Doc Feeder	This option will scan documents loaded in the document feeder of the scanner.
Multiple Pages	Multiple pages will be scanned and loaded into a single image. If the document feeder is being used then all the pages will be read into a single scanned image. The scanned image will then be converted into a single PDF document.
Document Type	Classify the document as to whether it is a data-log, Summary, RFQ etc.

Remote FTP Interface

This interface allows the user to move a file on a FTP server to the ERP2020 document server. This interface would for example be used when transferring a data-log or test-results-summary file from the tester to the Document Server.

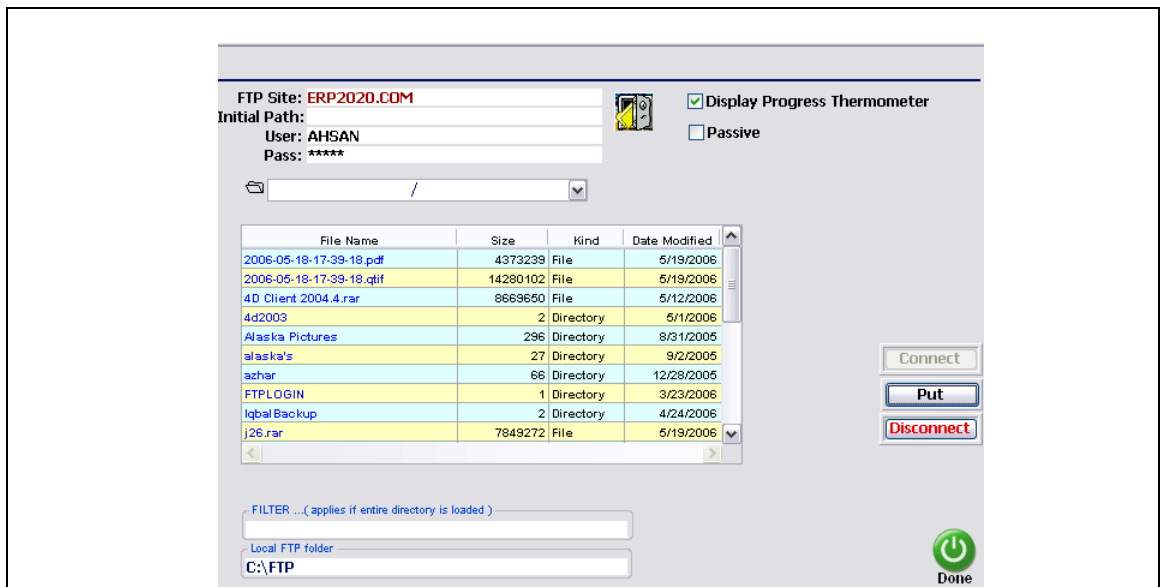


FIGURE 22.5

The user must specify the FTP site and account login information and press the “connect” button to make connection to the source FTP site.

Moving a file to the Document-Server Right-clicking on the file name will allow the user to download the file or copy it to the Document Server. Right-clicking on a directory will allow the user to move to the sub-directory.

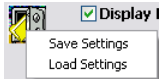
Emailing a File

Right-Clicking on a cell in the date-modified column will allow the user to email the file via a built-in erp2020 email-interface. Right-clicking on a directory will allow the user to email all the files in the directory, assuming that there are no more sub-directories in the referenced

directory. The user may also apply a filter to email only those files that include the filter-qualifier in their name

Saving Log-In information

The log-in information may also be saved and reloaded via the icon shown below. The information is saved on the local-client only.



Documents may be retrieved via a specific ERP2020 record (to which the documents are attached) or alternatively through an mirror-index of documents (on the Document Server) maintained by the ERP2020. During the normal course of operations the documents will be viewed in context. For example Test-Result-Summaries may be recalled by opening the appropriate traveler-step in the ERP2020 and an RFQ may be recalled by opening the associated Quotation in the ERP2020. Alternatively, however, the documents may be browsed via a generic interface using the mirror-index maintained by the ERP2020.

The retrieval process creates a list of related documents either by a direct FTP access or via the ERP2020 index mirror.

For details on the various retrieval processes see Table 3 on page 2.22.14. After the directory-list has been created for the record-specific documents a dialog is presented as shown in Table 22.6 on page 2.22.14. Right-clicking on a file-name presents a menu which allows the user to retrieve the file. If the user belongs to the "Modifier" group then the "delete" menu is also active. Note that deletion of the document is **not** reversible.

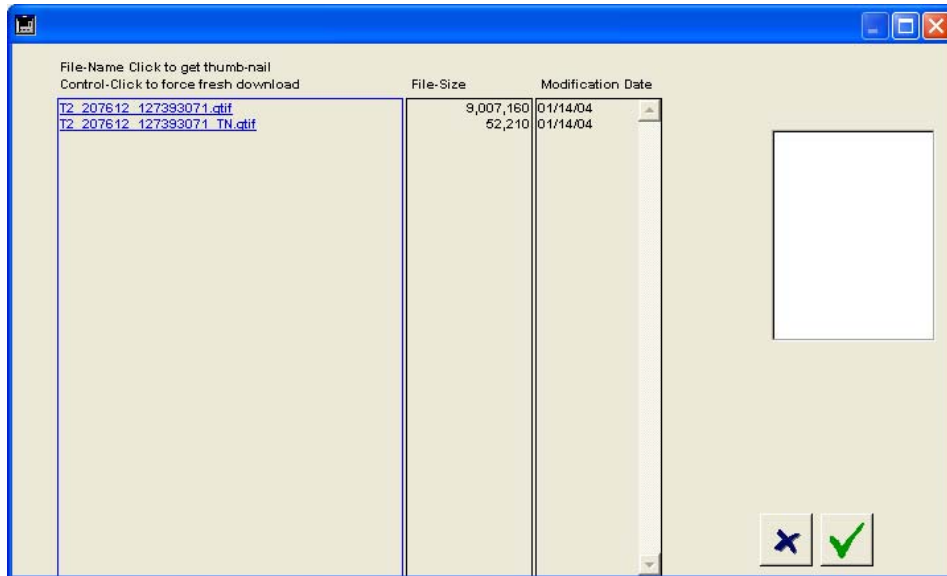


FIGURE 22.6

Mode	Volume or Path	Document retrieval mode
FTP	No URL defined (Null value)	Document will be fetched from the FTP server and placed on the ERP2020 client's local disk. A thumbnail of the file will also be displayed.
FTP	URL defined as "Http://erp2020.com/Semilabs-Docs"	Document will be opened via the default WEB browser. No thumbnails will be created. The user must assure that the default FTP directory defined for the account is within the realm of the Web-Server. Typically this directory will be is a sub-directory to the default-path of the web-server, otherwise the Web-Server may not publish the document for security reasons.

TABLE 3.

Document Retrieval and deletion continued.

DashBoard Access

The Document-Management facility is also available via the Dashboard.

