6 Form Tracking

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6 Form Tracking

Many forms are routed from person to person for approval purposes. Chapter 5, “Routing,” explains how you can add one or more suggested routes to a form template so that the Informed Filler user can better choose where to send a form. This chapter describes Informed’s form tracking features.

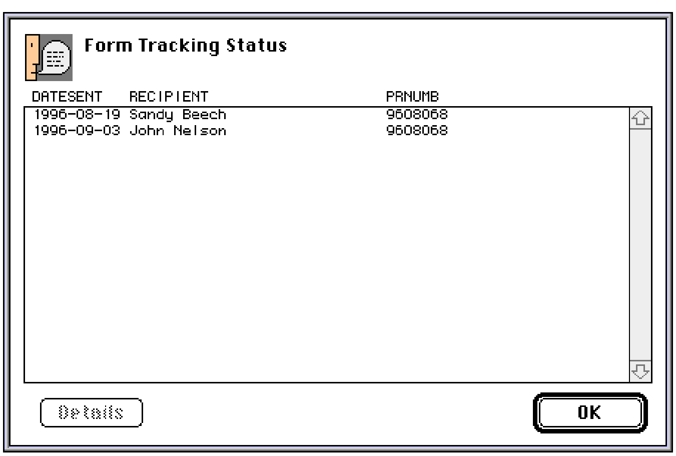
The purpose of form tracking is to provide the Informed Filler user with a way to quickly and easily find out where a form is in the routing process. Form tracking provides a quick alternative to “physically” tracing the path of a form to find its current location.

How it Works

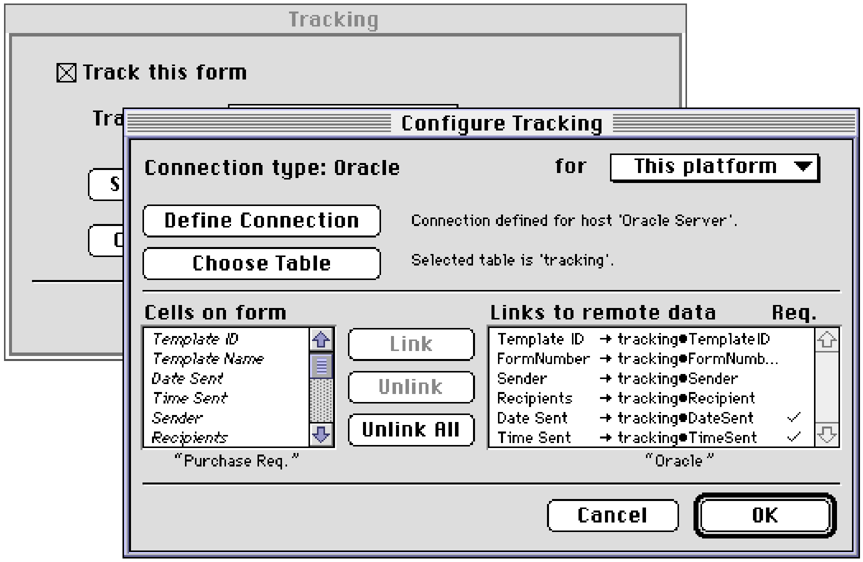
When an Informed Filler user sends a form to another person, the form data is stored in a file and attached to an electronic mail message. The message, along with the attached form data, is sent to the recipient using one of the supported e-mail systems. The recipient receives the “original” form whereas the sender retains a “copy.” The recipient performs the required task, then, if necessary, sends the form to the next step in the routing process.

In order to track a form, the information detailing each step that the form travels must be stored in a central database that is accessible by all Informed Filler users. That way, any sender of a form can retrieve the details regarding the other people to whom the form has been sent.

As a form is sent from person to person, the tracking status for the form is updated. Informed Filler does this by storing information, including the sender and recipient names, the date and time that the form was sent, and attributes that identify the form, in the tracking database. When the user requests the tracking status of a form, Informed Filler connects to the tracking database and retrieves the tracking details pertaining to the particular form and displays them on a dialog box.



Form tracking requires configuration using Informed Designer. To do so, you select the tracking database, specify which cell is to be used to uniquely identify forms, and link tracking information to the tracking database.



Informed Filler can track forms using any database that is accessible via Informed data access plug-ins. These include Oracle, Sybase, and others using ODBC and DAL. Other data access plug-ins that support form tracking might be available after this documentation is published.

By allowing you to use a wide range of databases for form tracking, you have the option of using the database services that might already be available in your organization. For large organizations, this is particularly beneficial because you don't have to install and administer yet another database solely for form tracking purposes.

Each time the Informed Filler user sends a form, a minimum set of information should be stored in the tracking database. This information includes:

- the template ID
- the form number
- the sender's name
- the recipient's name
- the date and time that the form was sent

The template ID is a number or value that identifies the form template. Each different template (a purchase order template, a travel expense form template, or a time card template, for example) should have a unique template ID. You specify the template ID using Informed Designer's Template Information command. See "Template Information" in Chapter 2 of your *Informed Designer Design and Graphics* manual for more information.

The form number is a number or value that uniquely identifies a completed form. The form number (a purchase order number or invoice number, for example) is stored in a cell on the form. Form numbers are often generated using Informed's auto-increment feature. In order to track a form, the form template must contain a form number cell. For information about Informed's auto-increment feature, see "Auto-incrementing Numbers" in Chapter 1 of this manual.

Together, the template ID and form number uniquely identify a particular completed form. These values must be included with the tracking information so that Informed Filler can later retrieve the information that pertains to a particular record when the user requests the tracking status. Also included are the sender's name, the recipient's name, and the date and time that the form was sent.

It is necessary that you create a table in your database with the appropriate columns to store the tracking information. This function is normally performed by the database administrator.

The table that you create for form tracking purposes should contain columns for the template ID, form number, sender's name, recipient's name, the date that the form was sent, and the time that the form was sent. All column types can be text. However, if you intend to later analyze the tracking information, you might want to store the date sent and time sent values using date and time columns, respectively. The tracking database you use might impose limitations here. The following is an example specification for a tracking table.

Tracking Table Specifications

Column name	Column type	Length
template_ID	char	20
form_number	char	20
sender_name	varchar	...255
recipient_name	varchar	...1024
send_date	date	
send_time	time	

Be sure that the length of any text column is long enough to store the longest values. Notice that in the example above, the length of the "recipient_name" column is longer than that of the "sender_name." This is because a form can be sent to multiple recipients whereas the sender is always only one individual. The column length for "recipient_name" is longer so that at least two or three recipient names can be stored.

In addition to the minimum set of tracking information, you can also include other "custom" information if you like. When configuring tracking for a form template, you can link any cell on the template to a column in the tracking table. This feature is useful if you plan to later analyze the tracking information to learn about the routing or approval process.

Analysis of the tracking information can reveal useful insights into the efficiency of the routing process. You could, for example, determine the minimum, maximum, and average times that it takes a form to travel through the entire routing process, or from one step to the next. You could experiment by changing the process, then repeat the analysis to see if the change brings improved efficiency.

Depending on the type of analysis that you intend to do, you might need to track more than the minimum set of tracking information. For example, if you want to analyze cycle times as in the above example, you will need to identify the particular step of the routing process when a form is sent and include this with the other tracking information. That way, when you analyze the tracking information, you can determine the dates and times of the different steps that a particular form has travelled.

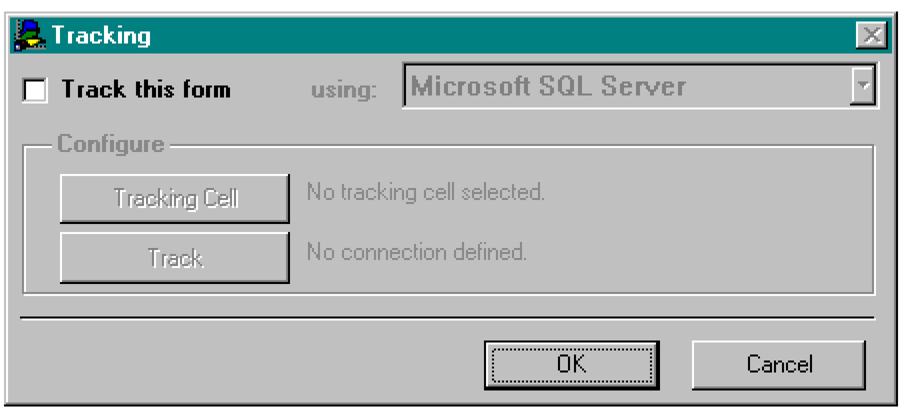
To identify and include the routing step along with the other form tracking information, you could draw a special cell on the template and calculate its value according to different criteria. You might, for example, check if a signature cell contains a signature and, in turn, infer the routing step. You would include this cell along with the other tracking information that is stored in the tracking database.

Configuring Tracking

Before you can configure form tracking, the tracking database that you intend to use must be set up and running. If access to the database is controlled on a user by user basis, you also need to create an appropriate identity (or identities) for tracking purposes. This, like configuring the tracking database itself, is normally performed by the database administrator.

You must have the data access plug-in for the type of tracking database that you intend to use installed in your plug-ins folder. For example, if you're configuring form tracking to store the tracking information in an Oracle database, you must have the Oracle data access plug-in installed in your plug-ins folder. You must also have the Tracking plug-in installed. These plug-ins are installed automatically when you install Informed Designer.

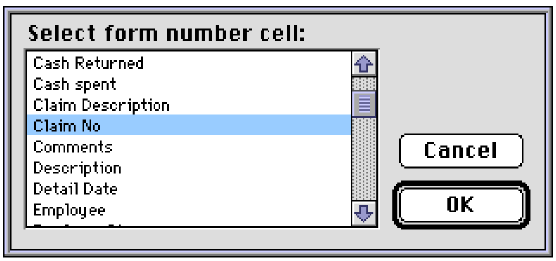
To configure tracking, choose **Tracking...** from the Configure submenu in Informed Designer's Form menu. The Tracking dialog box for the active template appears.



To turn tracking on, select the 'Track this form' checkbox. Make your choice of database or access method from the 'Using' drop-down list. The items in this list correspond to the data access plug-ins found in your plug-ins folder. Only those that support form tracking will appear as options in the 'Track using' drop-down list.

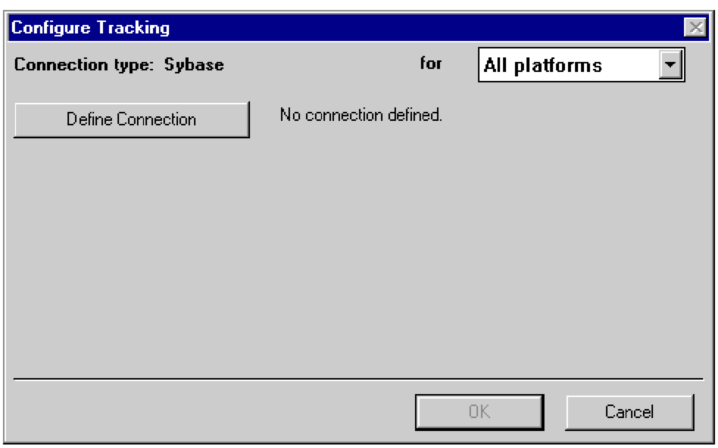
In order to track a form, the form template must contain a form number cell. This cell is like any other cell, except its purpose is to store a unique number or value for identification purposes. Its value is often obtained from a database or an application like Informed Number Server using Informed's auto-increment value feature. The form number along with the template ID of the form template are used to uniquely identify each completed form for tracking purposes.

In the context of form tracking, the form number cell is called the "tracking cell." You select this cell by clicking 'Tracking Cell' on the Tracking dialog box. A list of the cells on the template, excluding any column cells, appears.



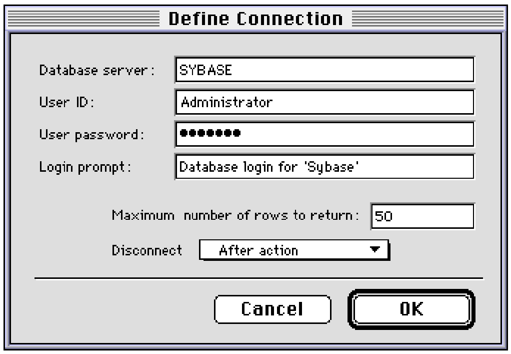
Select the tracking cell, then click 'OK.' The name of the cell appears next to the 'Tracking Cell' button.

To continue, click the 'Track' button to display the Configure Tracking dialog box.



The database or access method that you've selected appears at the top of the dialog box next to 'Connection type.' Below the connection type is a single button. The title of this button is specific to the type of database or access method you've chosen. For many types, the button title is 'Define Connection.'

With most databases, it is necessary to provide connection information in order to access the database. Connection parameters usually consist of a user ID, a password, and information that identifies the data source or server. This information is specific to the database to which you're linking. The Define Connection dialog box for Sybase is shown below.

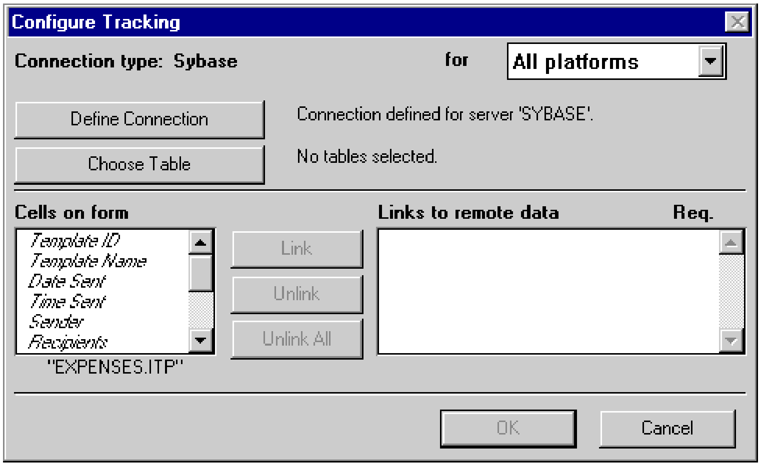


Depending on the database you're linking to, some of the connection parameters might be optional. For example, the 'User ID' and 'Password' parameters on the Sybase Connection dialog box are optional. If you leave either of these parameters blank when you configure form tracking, Informed Filler users will be asked to enter them when they mail a form or request the tracking status of a form.

The details of connecting to a particular type of database or data source are the same regardless of whether the connection is configured for a lookup, for an auto-incrementing cell, for form submission, or for form tracking. The details of the Define Connection dialog box as well as other relevant database-specific information, can be found in the "Data Access Plug-ins" topic of Informed Designer's on-line help system.

Note Before you can configure form tracking with an external data soure, the data source (a dBase file, for example) must already exist. Informed Designer will not create the database or data source for you.

If additional configuration information is needed (which is the case for most databases), once you've defined the connection, the Configure Tracking dialog box will change to show additional buttons and two scrolling lists.



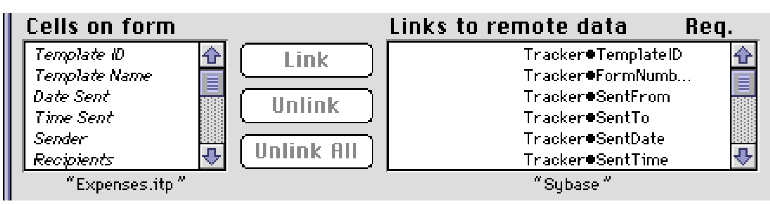
Depending on the type of database or access method you've selected, the appearance of button titles and dialog boxes may vary. The examples shown in this section correspond to tracking with Sybase.

After defining the connection, you then specify the database table in which form tracking information will be stored. You select which table by clicking the 'Choose Table' button.

Note

> In order to choose a table, Informed Designer needs to connect to the database to obtain the list of available tables and columns. Be sure the connection has been properly defined and the database or data source is available before you click 'Choose Table.' If you have left any connection parameters blank, you might be asked to enter them when you click 'Choose Table.'

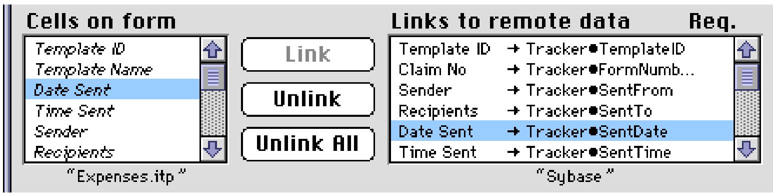
When configuring for Sybase, multiple dialog boxes will appear when you click 'Choose Table,' one to select a database and one to select a table. Once you've selected a table, the corresponding columns will be listed in the 'Links to remote data' scrolling list. Each column name will be prefixed with the name of the table to which it belongs.



The scrolling lists titled 'Cells on form' and 'Links to remote data' are used together to specify which tracking information is entered into which columns in the tracking database. The 'Cells on form' list contains all cells on the form template as well as special items that are specific to form tracking. The items "Template ID," "Template Name," "Date Sent," "Time Sent," "Sender," and

“Recipients” are not cells. They correspond to the tracking information that is available when Informed Filler sends a form (see “How it Works” earlier in this chapter for more information).

The ‘Links to remote data’ list contains the names of the columns in the selected database table. To specify that a value is to be entered into a column, simply select the cell or tracking-specific item in the left list and the column in the right list, then click the ‘Link’ button. The name of the item will appear in the ‘Links to remote data’ list with an arrow pointing towards the column name.



To unlink one column, select the column then click ‘Unlink.’ To unlink all columns, click ‘Unlink All.’

In order for form tracking to work, you must link at least the Template ID item and the cell that you’ve selected as the tracking cell. Furthermore, since the purpose of form tracking is to track the date and time that a form is sent, as well as the sender and recipient(s), you should also link the Date Sent, Time Sent, Sender, and Recipients items.

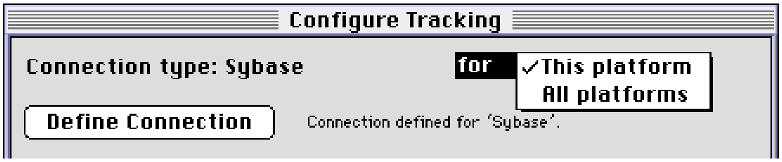
Depending on how the tracking database is configured, linking might also be required for other columns in the database table. If linking is required for a particular column, you’ll see checkmark in the ‘Req.’ column of the ‘Links to remote data’ scrolling list.

Once you’ve defined the connection and performed the necessary configuration, click ‘OK’ on the Configure Tracking and Tracking dialog boxes.

Configuring for Multiple Platforms

Many of the databases and data sources that Informed can link with are accessible from both the Windows and Mac OS platforms. However, the details of accessing a database or data source from each of the platforms might be different. For example, suppose that you’re configuring form tracking with an Oracle database. For Mac OS users, you might be accessing the Oracle database using the Macintosh Oracle client software (SQL*NET), whereas on Windows you might be using ODBC instead. The specific parameters needed to connect to the database, therefore, might be different depending on which platform the Informed Filler user is using.

The Configure Tracking dialog box contains a drop-down list with the items ‘This platform’ and ‘All platforms.’



For each different connection type, Informed Designer knows if the configuration details are the same or different for the two platforms. If the connection type is supported on both platforms and the configuration details are the same on both, the ‘All platforms’ option will be available. With this option selected, the linking you configure on one platform will function on both.

If the configuration details are different for each platform, or if the connection type is available only on the platform you’re using, ‘This platform’ will be the only choice available in the drop-down list. For accessing these types of databases and data sources, you have to configure tracking on one platform, then move the form template to the other platform and repeat the configuration. Informed Designer stores the configuration for both platforms. Informed Filler uses the configuration that corresponds to the user’s platform.

Although it may be necessary to configure form tracking twice, once on each platform, the resulting form template document is still a platform neutral document. That is, a single version of the template will work with Informed Filler on both platforms. Informed Filler automatically uses the configuration information that is appropriate for the user’s platform.

Note

Due to a production error, page 1-5 of the *Informed Designer Getting Started Guide* states that instructions for setting up and using the Informed Tracker Server (Mac OS only) can be found in this chapter. These instructions are actually available in the on-line help file “Tracker Help” found in the Other Products folder on the Informed CD-ROM.