# 5

Application Security

This chapter examines the nature of Taskmaster's Application Security, and procedures for defining **and** limiting the scope of user, workstation and shortcut access to an application's administrative procedures, data and operations.

The contents of Chapter 5 include:

Taskmaster Security—Introduction

As Administrator, you are responsible for maintaining the security of your *Taskmaster* system on four levels: User, User Group, Station and Shortcuts.
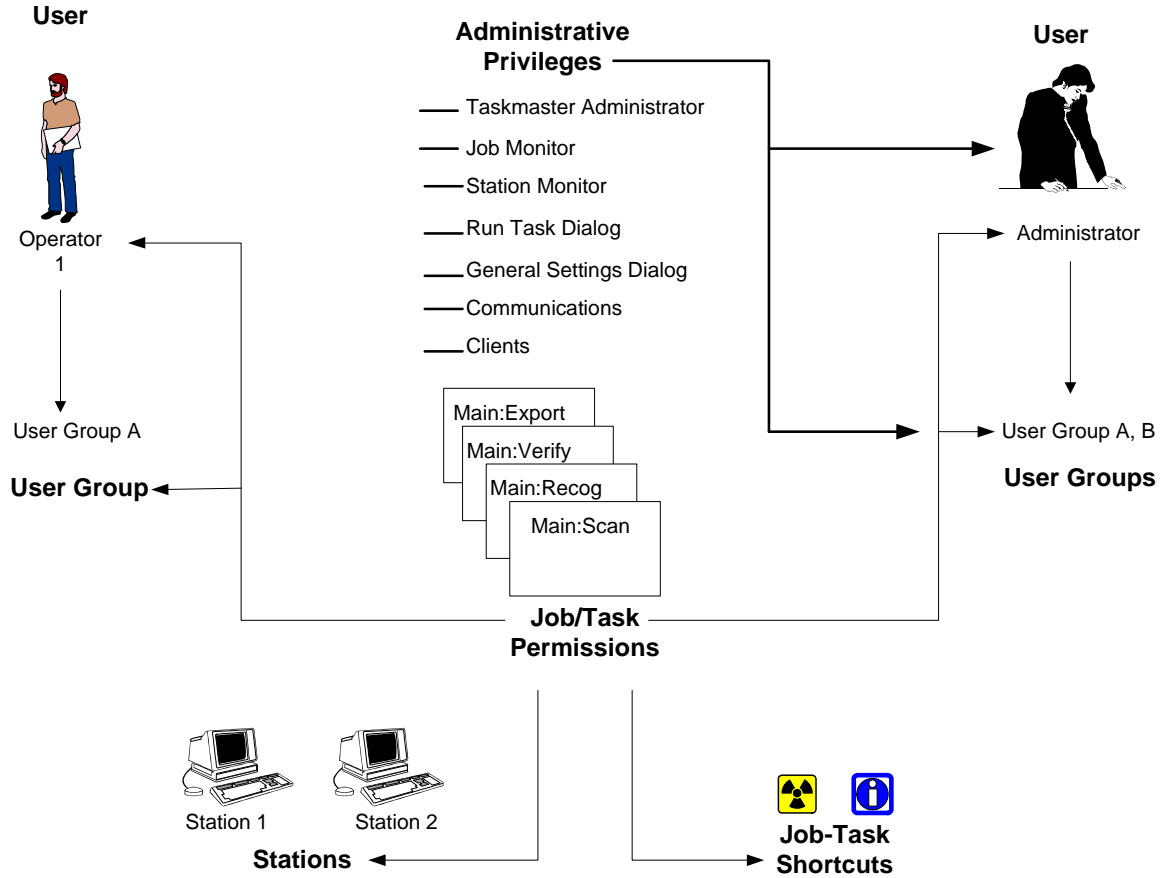
Users: individuals within your organization who access *Taskmaster* data and run the workflow's tasks.

User Groups: multiple users responsible for the same task(s) or administrative activities.

Stations: network computers that launch Taskmaster Client activity—retrieving and processing jobs, tasks, batches and files.

Shortcuts: the **Operations** window icons that launch Job/Task Combinations.

Taskmaster Security provides three control mechanisms:

- **ID Codes.** You assign unique access codes to each station, user and User Group.

- **Permissions.** You give individual users, User Groups, stations *and* Job-Task shortcuts permission to carry out one or more Job/Task Combinations - but *only* those Job/Task Combinations.

- **Administrative privileges.** You define and therefore *limit* an individual user's ability to participate in *Taskmaster's* Administrative procedures – or the members of a User Group.

To set up an application's Security program, you'll use the Security tabs of the *Taskmaster Administrator*. To access the *Taskmaster Administrator*, select **Groups**, **Users, Stations** or **Shortcuts** from the **Settings** menu of the *Taskmaster Window.*

➔ For a complete explanation of the *Taskmaster Administrator*, see Chapter 6 of the *Taskmaster Windows & Dialogs Reference* or *Taskmaster* Help. The discussions in this chapter examine details of the four Security tabs: *Groups, Users*, *Stations* and *Shortcuts*.
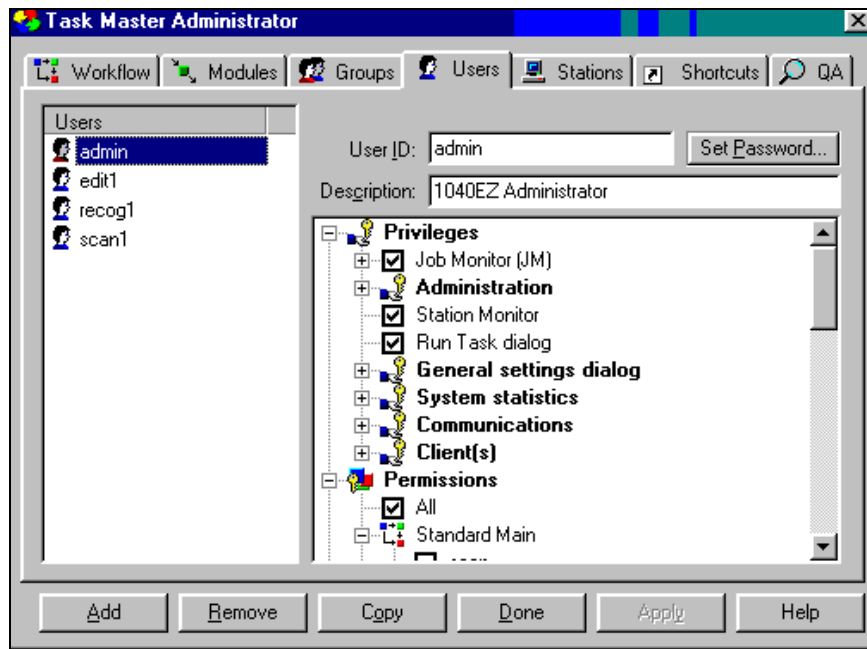
1040EZ Taskmaster Administrator – *Users tab*

User Security

If you use the *Taskmaster Application Wizard* to construct a new application (Chapter 4), the wizard automatically places a number of users in the **Users** lists on the **left-hand** side of the *Users* tab:
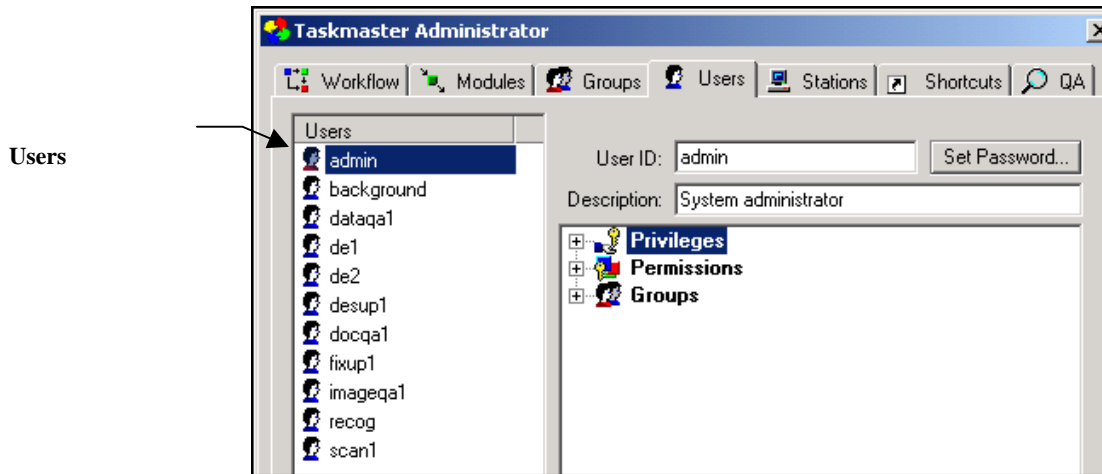
Users

Taskmaster Administrator (*New Application*)– *Users Tab*

In contrast, the default configuration of the *Users* tab of the *1040EZ* application is more limited:
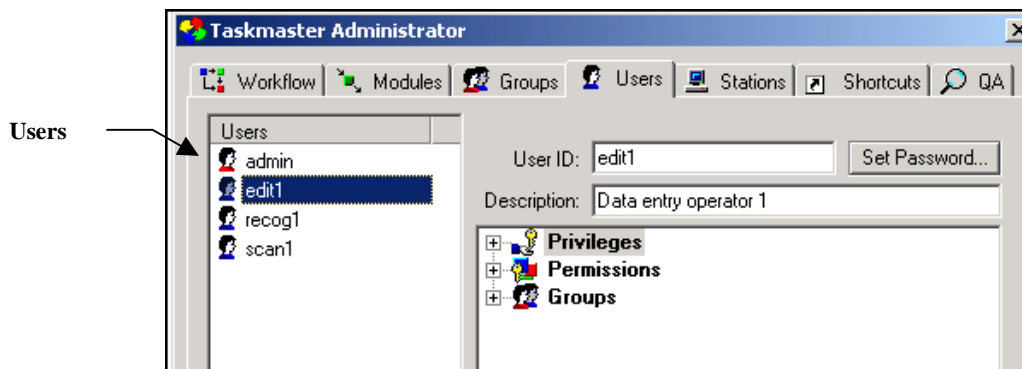
Users

1040EZ Taskmaster Administrator – *Users Tab*

✓ The difference between the two examples is that none of the users in the first example has a full set of credentials while each *1040EZ* user is fully defined. This means that the *1040EZ* users have been assigned:

- Authentication criteria

- User ID's and Passwords

- Administrative privileges (if applicable)

- User Group affiliation

- Permission to carry out specific Job/Task Combinations.

Below, the "users" of the new application have nothing but **User ID's**.

To remedy this situation, you'll use the *Taskmaster Administrator's Users* tab to construct a series of formal **User Definitions.** (The same procedures also modify existing User Definitions.)

A User Definition begins when you assign a unique User ID and a Password to an operator, a supervisor…even to yourself. *Taskmaster* will then give the individual access to the application if he or she can supply this combination of codes.

You can then fill out the User Definition with qualifications of three types: **Privileges**, **Permissions** and **Groups.** A full discussion of these qualifications begins on Page 8. First, take a moment to review the fields and functions of the *Users* tab itself.
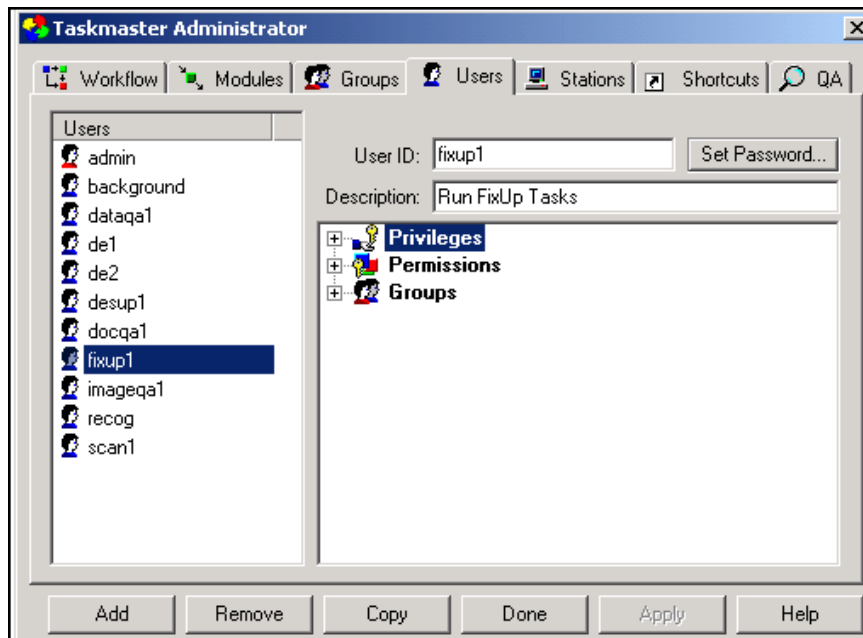
Taskmaster Administrator – *Users Tab*

| Field/Function	Explanation
User List	A list of User IDs representing the User Definitions you've compiled.
	Taskmaster can add a new User ID to this list only after you provide the new user with a Password (see the next page) and press the Apply button (below).

Users Tab (continued)

| Field/Function	Explanation
User ID	A *unique* identifying code you assign to the user and, therefore, to the User Definition. The user needs this code (and a Password) to sign on to an application.
Description	A brief description of the user and his or her responsibilities.
Set Password button	Accesses the *User Password* dialog. You'll use this dialog to add or change a Password.
Qualifications	A list of all possible user qualifications, in three categories: Administrative **Privileges**, Job-Task **Permissions**, and User **Group** affiliations. When you define a new user, you'll select applicable qualifications from each category
Add button	Clears the **User ID** and **Description** fields so you can construct a new User Definition *Alert!* You *must* click on this button to initiate the definition process.
Remove button	Deletes the User Definition you've highlighted in the **Users List**, after a proper warning.
Copy button	Creates a new User Definition by copying an existing definition.
Done button	Closes the *Users* tab after you've assembled, modified or reviewed a User Definition.
Apply button	Adds a new User ID to the **Users List** (after you've supplied a Password) or updates an existing User Definition with your changes.
Help button	Accesses *Taskmaster* Help.

☛ If the Taskmaster Application Wizard is responsible for the skeleton of your application, *be sure* to review the default criteria, if any, assigned to the User Definitions you are retaining – and delete the others. For details, see the *Guide to the Taskmaster Application Wizard.*

User Passwords

One of the first steps you take when you define a new user is to click on the Set Password button. This leads you right to the *Change Password* dialog.
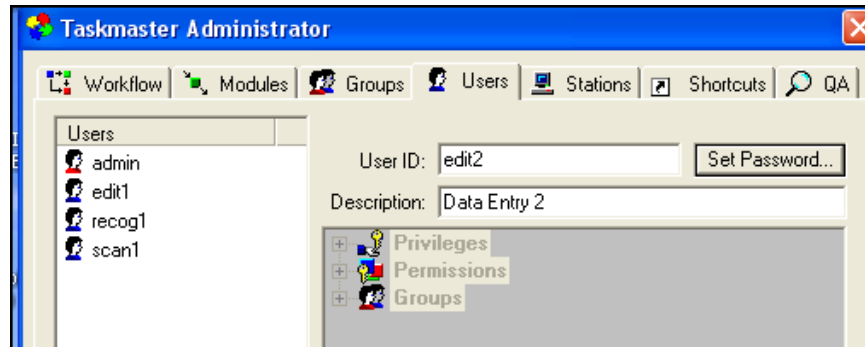
1040EZ Taskmaster Administrator – *Users tab*
New User (Edit 2)
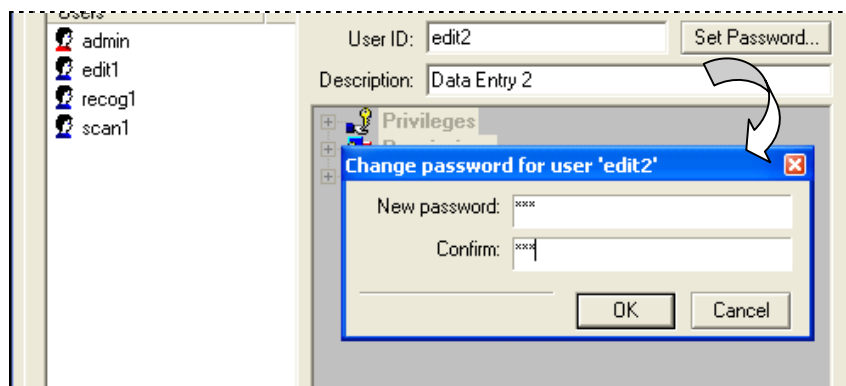
Change Password Dialog (New User)

✓ *Very important!* An individual can access the application *only* if he or she can provide the **User ID** you entered in the *Users* tab, and the **Password** you enter and confirm in the *Change Password* dialog.

✓ As an alternative, you can use Windows Authentication and Windows Group Authentication to assign individual or group criteria to a user. These criteria are based on his or her membership in a Windows domain. For details, see Page XX.

User Qualifications: Privileges, Permissions and Group Assignments

Administrative Privileges

A User Definition determines the ability of an individual to access administrative dialogs and data, and to carry out administrative functions. These attributes become the user's **Administrative Privileges**. (You can also assign privileges to members of a User Group. For details, see Page 20).

Assigning privileges is an important aspect of the User Definition process. *Alert!* Most users in a typical application are assigned few, if any, administrative responsibilities.
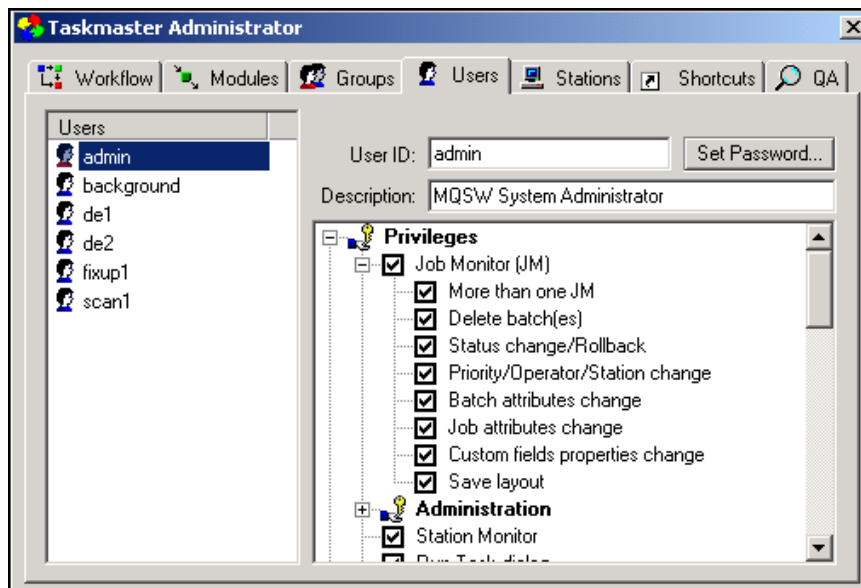
Taskmaster Administrator—*Users Tab*
Administrative Privileges

The chart on the next page identifies all options of the fully-expanded *Privileges* hierarchy; the table below the chart explains each option. **Please note**: for explanations of each administrative window and dialog, see the *Taskmaster Windows & Dialogs Reference.*

✔ To assign a privilege to a User Definition, click on the check box next to it in the list. Later, when you press the Apply button to save the settings of the User Definition, *Taskmaster* will add this specification to the database.

✔ Because the options in this list represent Administrative activities, User Definitions for task operators do not usually include any of these options. Be sure to give careful consideration to the nature and impact of a privilege before assigning it to a user.

✔ Note that in the example above, the list of current users has been trimmed significantly.

User Definition

Privileges

- **Job Monitor (JM)**
  - ☐ More than one JM
  - ☐ Delete batch(es)
  - ☐ Status change/Roll-back
  - ☐ Priority/Operator/Station change
  - ☐ Batch attributes change
  - ☐ Job attributes change
  - ☐ Custom fields properties change
  - ☐ Save Layout
- **Administration**
  - ☐ Workflows
  - ☐ Task Modules
  - ☐ User groups
  - ☐ Users
  - ☐ Change Passwords
  - ☐ Stations
  - ☐ Shortcuts
  - ☐ QA

- ☐ **Station Monitor**

- ☐ **Run Task Dialog**
  - **General Settings dialog**
    - ☐ Databases
    - ☐ Advanced
    - ☐ Logging
  - **Communications**
    - ☐ Messaging and Chat
    - ☐ Remote Administration
  - **Client(s)**
    - ☐ Report Viewer/AutoDelete
    - ☐ Taskmaster Web
    - ☐ Taskmaster Sub (Client Service)
    - ☐ Datacap Studio

User Definition—Administrative Privileges

Privilege	Description
Job Monitor	Gives the user access to the batch listings of the *Job Monitor* as it appears within the *Taskmaster Window*. Selection of this option also leads to additional privileges associated with the use of the *Job Monitor.* These additional privileges appear at the next level of the hierarchy (described below); in most cases, they involve the selection of menu items from the *Taskmaster Window* when the *Job Monitor* is active.
More than one Job Monitor	Gives the user the right to work with multiple *Job Monitors* concurrently by selecting **New Monitor** from the **View** menu. *Alert!* This privilege also gives the user access to the tools of the *Job Monitor Manager*.
Delete Batches	Provides access to the **Delete** item in the **Record** menu of the *Taskmaster Window*, giving the user the ability to delete processed batches.

User Definitions—*Administrative Privileges (continued)*

| Privilege	Description
Job Monitor (continued)	Provides access through the **Record** menu to the *Status Change/Rollback* dialog, allowing the user to "roll back" a batch to an earlier task.
Status Change/Roll-back	Provides access through the **Record** menu to the *Status Change/Rollback* dialog, allowing the user to "roll back" a batch to an earlier task.
Priority/Operator/Station Change	Provides access to the **Change Properties** item of the **Record** menu and, as a result, to the *Change Operator/Priority/Stations* dialog. With this privilege, a user can assign a new operator or station to a batch, or change its priority in a task's processing queue.
Batch Attributes Change	Gives the user access to the **Batch Attributes** item of the **Record** menu and its *Batch Attributes* dialog. After highlighting a batch in the *Job Monitor*, a user with this privilege can modify its Batch ID, assign the batch to a new Batch Directory, or link it to a different Page file.
Job Attributes Change	Gives a user access to the *Batch History* dialog.
Custom Field Properties Change	Provides access to the *Custom Field Properties* dialog by way of the **Record** menu, if you have added a "custom" column to the *Job Monitor's* Batch Information Table. The ability to define new columns is a *Taskmaster* feature. For a complete explanation, see Chapter 9.
Save Layout	Gives the user access to the formatting functions of the **File** menu's **Header/Footer** item, and lets the user save changes to the *Job Monitor's* layout.
Administration	These options give the user access to the tabs of the *Taskmaster Administrator* - tab by tab. *Be careful!* Selecting an option from this list gives the user access to information, procedures and settings normally reserved for the Administrator.
Workflow	Provides access to the *Workflow* tab. A user with this privilege can review the set up parameters of existing workflows, jobs and Job/Task Combinations—*and* define new workflow hierarchies (Chapter 4).

User Definitions—Administrative Privileges (continued)

Privilege	Description
Task Modules	Provides access to the *Modules* tab. A user with this privilege can review and modify the definition of any Task Module.
User Groups	Gives the user access to the ***Taskmaster Administrator***'s *Groups* tab. A user with this privilege can review the structures of existing User Groups and define new groups (Page 20). ***Be very careful:*** the *User Groups*, *Users*, and *Stations* tabs are central components of Application Security. Access to these tabs should be strictly limited.
Users	Provides access to the *Users* tab. Any user with this privilege can review and modfiy details of existing User Definitions. ***However***, to set up additional User Definitions, the current user must have a Change Password permission (below).
Stations	Provides access to the *Stations* tab. A user with this privilege can review the security parameters of each workstation and set up additional stations (Page 27.)
Change Passwords	Allows a user who is also equipped with a Users privilege (above) to assign or modify a password a user's Password. Because a new User Definition requires a Password, this privilege is a requirement for any administrator who intends to add users to an application. ***Alert!*** Change Password is a new privilege in *Taskmaster 7*.
Shortcuts	Provides access to the ***Taskmaster Administrator***'s *Shortcuts* tab (Page 32). A user with this privilege can create or modify the Job/Task shortcuts that appear in the secondary ***Operations*** window of the ***Taskmaster Window*** (Page 32).
QA	Provides access to the *QA* tab. This tab allows an authorized user to set up Quality Assurance child jobs.
Station Monitor	Gives an authorized user access to information in *Taskmaster's **Station Monitor***.

User Definitions—*Administrative Privileges (continued)*

Privilege	Description
Run Task Dialog	Provides access to the **Run Task** item in the **Database** menu of the *Taskmaster Window* and to the features of the *Run Task* dialog.
General Settings	Selecting **General** from the **Settings** menu of the *Taskmaster Window* retrieves the three tabs of the *General Settings* dialog. These options give a user the right to review information *and* modify settings in one or more of these tabs (below).
Databases	Accesses the *Databases* tab of the *General Settings* dialog and its Data Source specifications.
Advanced	Accesses the application specifications of the *Advanced* tab.
Logging	Accesses specifications of the *Log* tab that determine when and how the application is to generate Log files.
Communications	The *Communications* privileges allow a user to communicate electronically with members of the Datacap network—and to run tasks from remote workstations.
Messaging and Chat	Grants a user access to the **Open Chat Window** and **Send Message** features of the **Tools** menu.
Remote Administration	Permits the user to work with the three "remote station" items of the **Tools** menu: **Start Task**, **Stop Processing** and **Shut Down**.
Client(s)	These additional privileges allow the user to employ his or her Taskmaster Client in three special ways.
Report Viewer/**AutoDelete**	Lets the client generate task reports from the *Report Viewer* (Chapter 6). The privilege's *new* AutoDelete component allows the user to use the *AutoDelete* utility to remove batches on an ad hoc or scheduled basis (Chapter 7.)
Taskmaster Web	Authorizes the client to access and work within an application's *Taskmaster Web* site. (The *Guide to Taskmaster Web* examines all facets of operations in this Internet environment.)
Taskmaster Sub (Client Service)	Authorizes the client to initiate the *Taskmaster Client Service*. (For details, see the separate documentation covering this service.)
Datacap Studio	A *new* privilege that gives the user access to Datacap Studio.

✓ In addition to individual users, *Taskmaster 6.5* lets you assign privileges to all members of a User Group. For details, see Page 20.
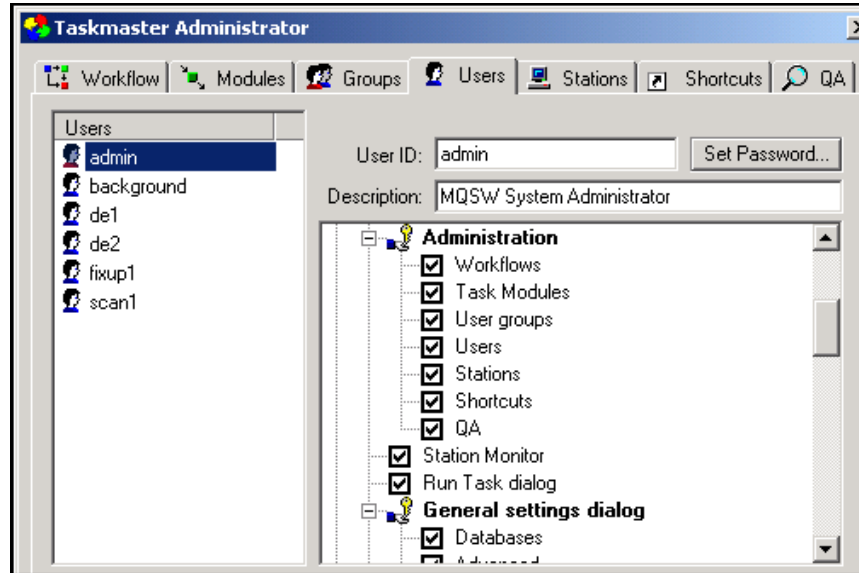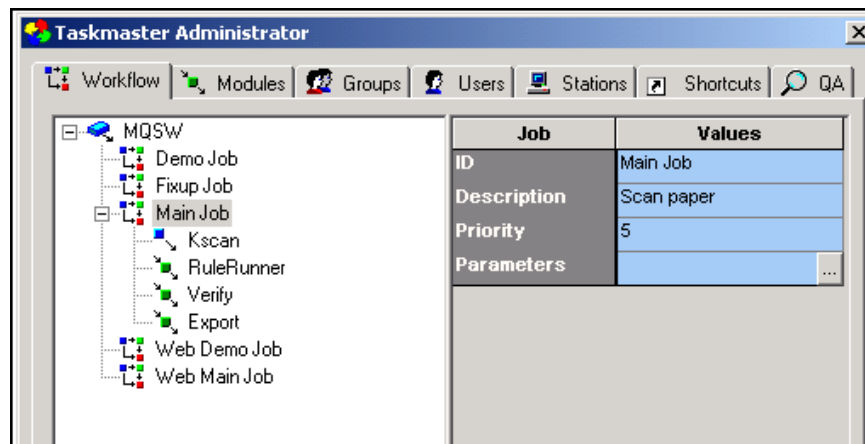

Taskmaster Administrator—*Users Tab*

User Qualifications: Job-Task Permissions

The second component of a User Definition gives the user "permission" to initiate and run the Job/Task Combinations of an application's workflow(s).

✓ *Remember:* A Job/Task Combination links a specific task to a specific job, and is *Taskmaster's* fundamental processing entity. Below, the *Workflow* tab of the *MQSW* application's *Taskmaster Administrator* highlights these essential elements of a workflow's hierarchy:
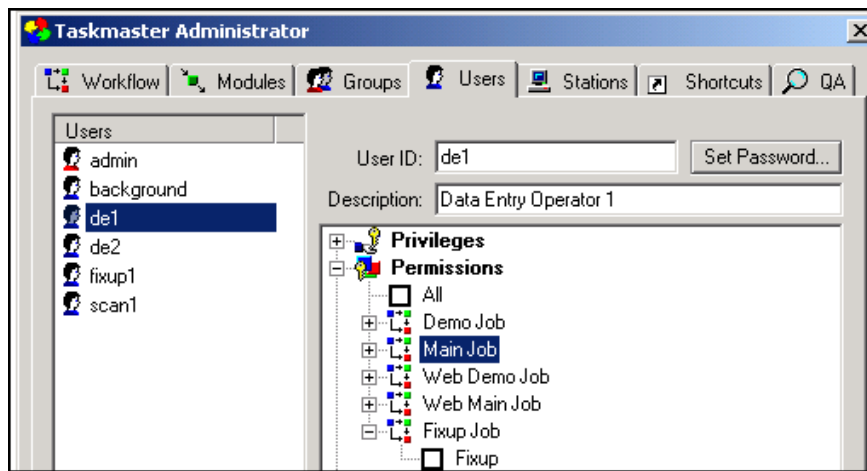

Taskmaster Administrator – *Workflow tab*

In this example, there are *four* Job/Task Combinations: Main Job.KScan, Main Job.RuleRunner, Main Job.Verify and Main Job.Export.

Application Security grants **permission** for one or more combinations to users, User Groups, workstations and processing shortcuts. But…how do you assign these permissions? And to whom, and what?

> The next few pages show you *how* to assign Job-Task permissions. Decisions about which users and workstations can carry out which tasks belong to you, of course – and are *extremely important*.

Like its list of Administrative **privileges**, the *Users* tab's list of Job-Task permissions is hierarchical: if you click on the **+** icon next to the *Permissions* title at the top of the list, *Taskmaster* will identify the application's jobs, and provide you with an option (illustrated in the example on the next page). Select *All* if this user is an Administrator or Supervisor you are authorizing to run *all tasks in all jobs*.


Taskmaster Administrator – *Users tab*

As you can see, however, the other items are accompanied by the **+** icon. This icon leads you to Level 2, where the tasks assigned to each job appear—each with a check box.

To give a user permission to run a particular task, click on the check box next to that task. *Taskmaster* Security procedures ***do not allow*** a user to initiate or operate a task until you have granted him or her the necessary permission.

✓ *Very important!* Each of three entities must have permission to launch a specific Job/Task Combination:

- The user

- The station (Page 27)

- The Job-Task shortcut icon in the *Operations* window (Page 32)..
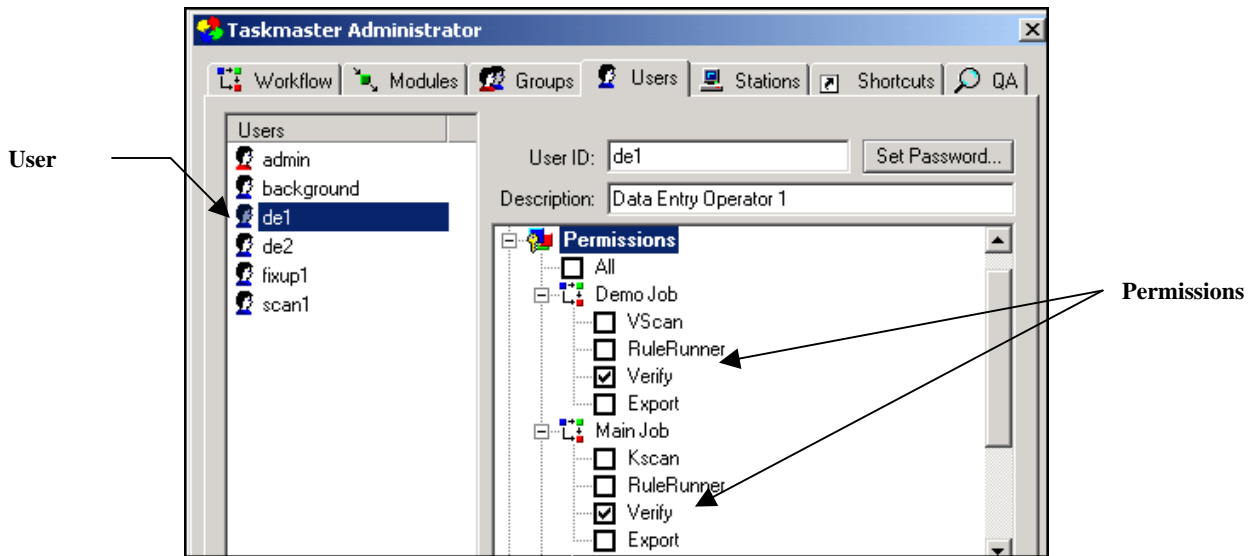
User Definition - *Job Task Permissions*

An application does not have to rely solely on the *Users* tab for Job-Task permissions. Instead, each user is part of at least one User Group and automatically inherits the permissions assigned to the Group. *Alert!* Be careful about the *Everyone* Group (Page 20).
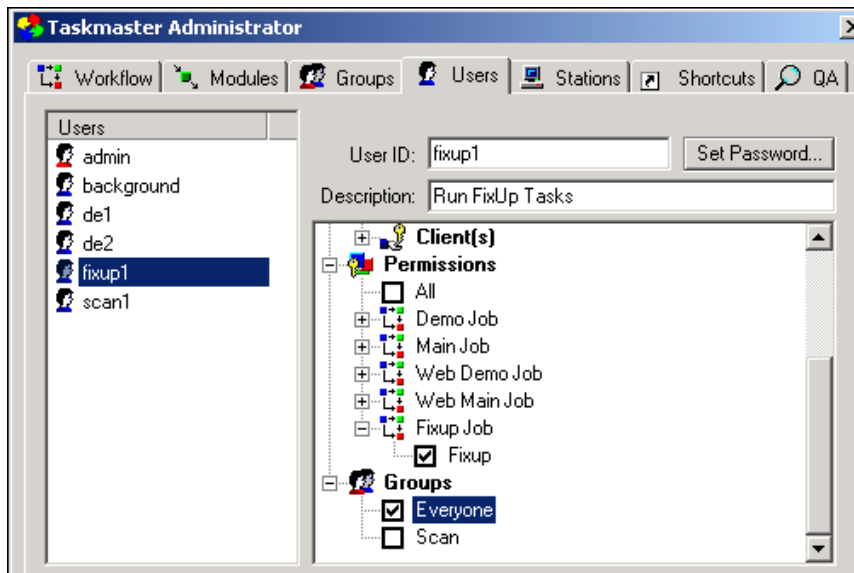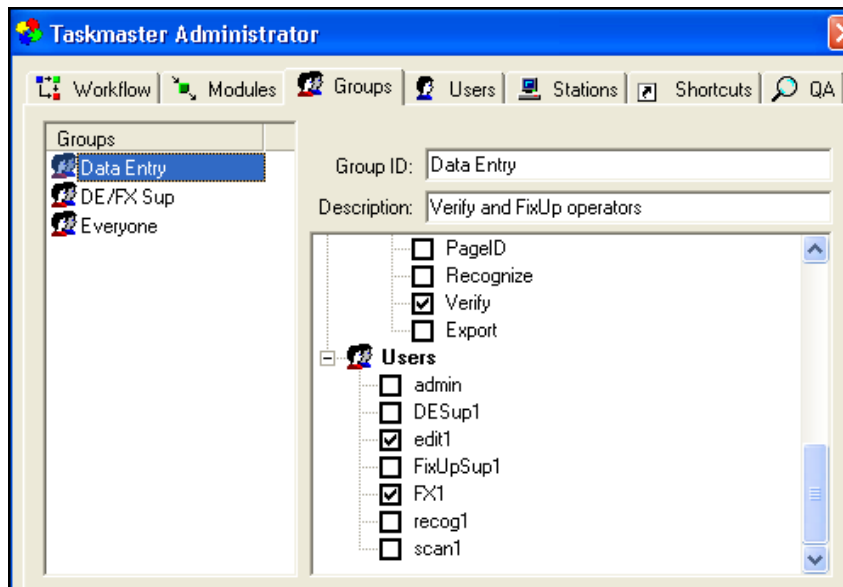

Taskmaster Administrator – *Users Tab*
Job-Task permissions and Group Affiliations

User Definitions: User Group Affiliations

The third component of a User Definition is the user's affiliation with a User Group.

This is an *optional* attribute of a User Definition. In the example below:

- There are three User Groups: *Data Entry, DE/FX Sup,* and *Everyone*

- The Data Entry and FixUp operators pick up their Job-Task permissions as well as limited Administrative Privileges - from the Data Entry group.

- Similarly, their supervisors can launch the same Job/Task Combinations but have more extensive privileges (Page 20).


Taskmaster Administrator – *Groups tab*

✓ In *Taskmaster 6.5*, the definition of a User Group does allow you to assign Administrative Privileges. Keep in mind, however, that a User Definition takes precedence over a User Group Definition – if the User Definition provides the user with additional privileges and permissions.

For a full explanation of the *Groups* tab and User Group definitions, see Page 20.

How to Define a User: Step-by-Step

To put together a new User Definition, take these steps:

Step	Action

1.   Select **Users** from the *Taskmaster Window's* **Settings** menu**:** the *Users* tab will appear on your screen.

2.   Press the Add button to clear the tab's interactive fields.

3.   Enter a unique **User ID**.

4.   Enter a brief **Description** of this user.
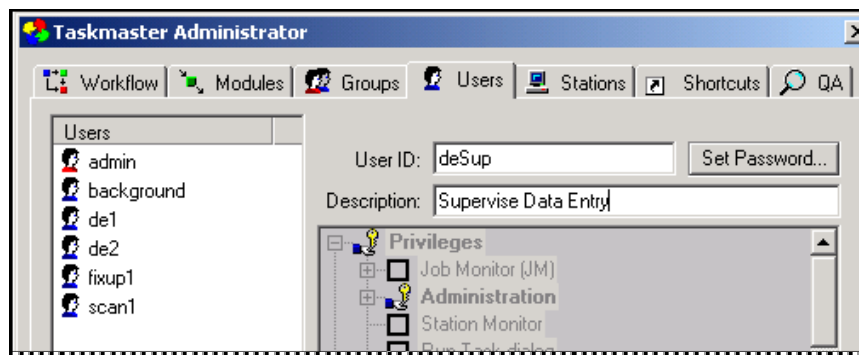
5.   Click on the Set Password button to access the *Change Password* dialog.


6.   Enter a **New Password.**

7.   Select **TM Authentication** or **Windows Authentication** (Page 7).

8.   **Confirm** the Password, and press the OK button to return to the *Users* tab.

9.   Press the Apply button at the bottom of the *Users* tab: be sure that *Taskmaster* has included the new User ID in the **Users List** and has activated the **Qualifications** field (*Privileges, Permissions,* and *Groups).*
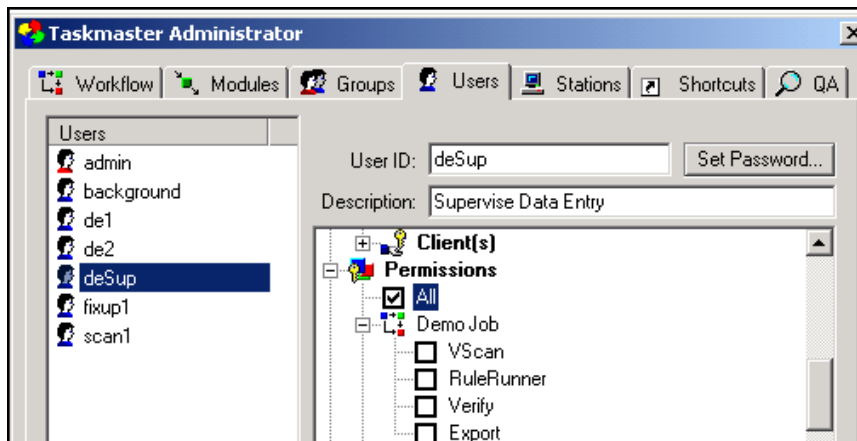
To Define a User (continued)

Step	Action

10. From the *Privileges* options, specify this user's administrative responsibilities, if any.
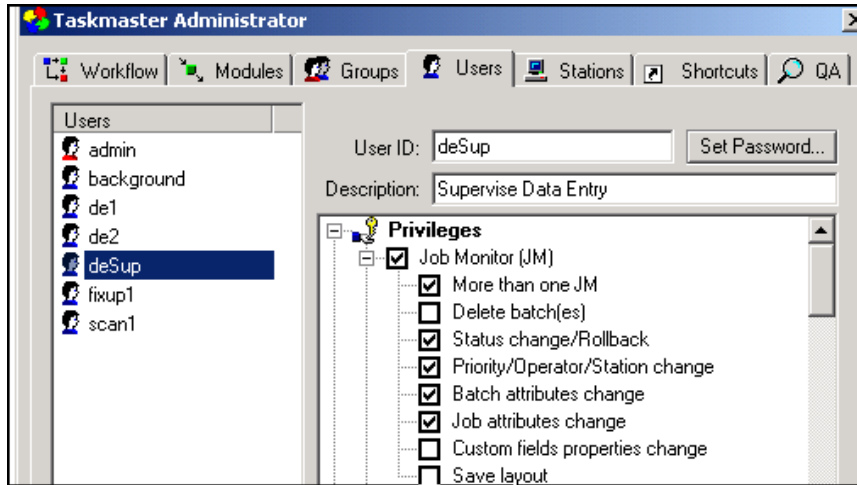
11. Scroll to the *Permissions* area. Select those Job/Task Combinations for which this user will be responsible.

To Define a User (continued)

Step	Action

12.   Scroll to the *Groups* area. If you are assigning this user to a User Group other than *Everyone*, select the applicable Group ID(s). ***Remember:*** You can define a User Group later on, then update this User Definition with a new Group assignment.
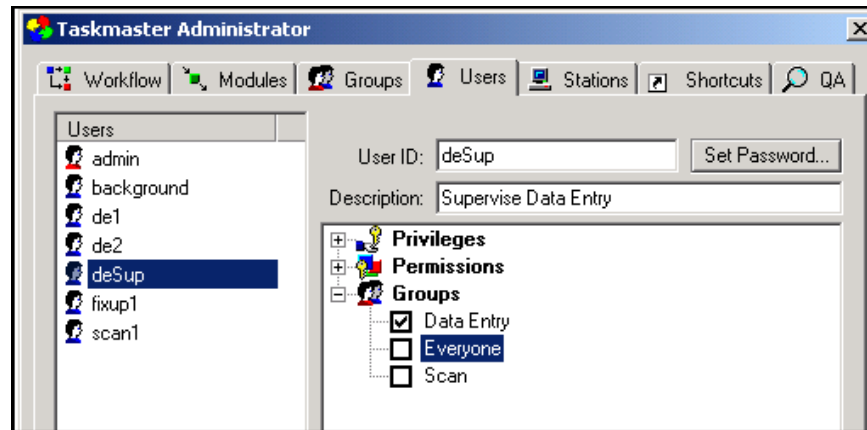

13.   Review your settings.

14.   Press the Apply button at the bottom of the tab.

15.   Press the Done button to close the ***Taskmaster Administrator***.

User Groups

A User Group identifies individuals with the same or similar responsibilities, and assigns all members the same Job-Task permissions and, if applicable, identical administrative privileges. As a result, a particular User Definition does *not* have to include permissions and privileges: the user can "inherit" those of a group.

User Group Qualifications: Privileges and Permissions

Below, the *Users* tab (Page 4) lists six users, in addition to the all-powerful *admin* user. The *edit1* and *FX1* operators are responsible for interactive Data Entry and FixUp procedures. *DESup1* and *FixUpSup1* supervise these procedures, and their operators.
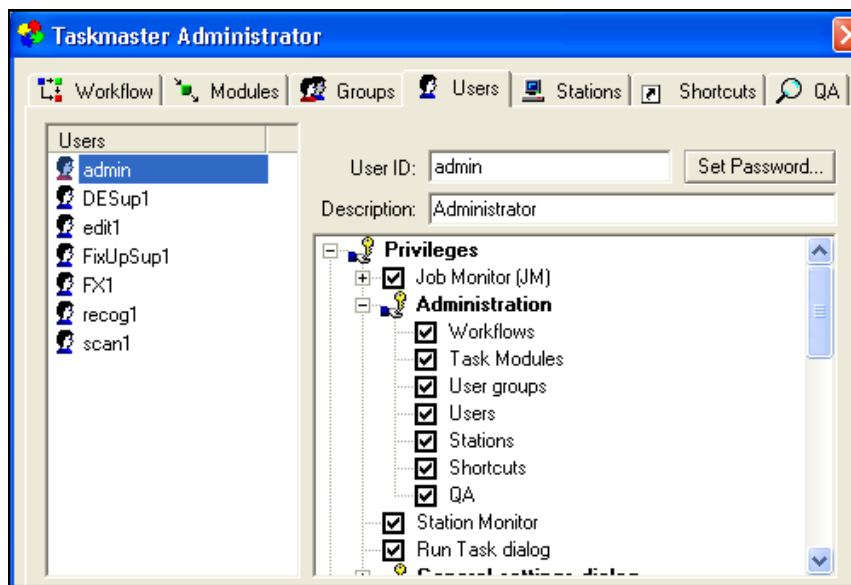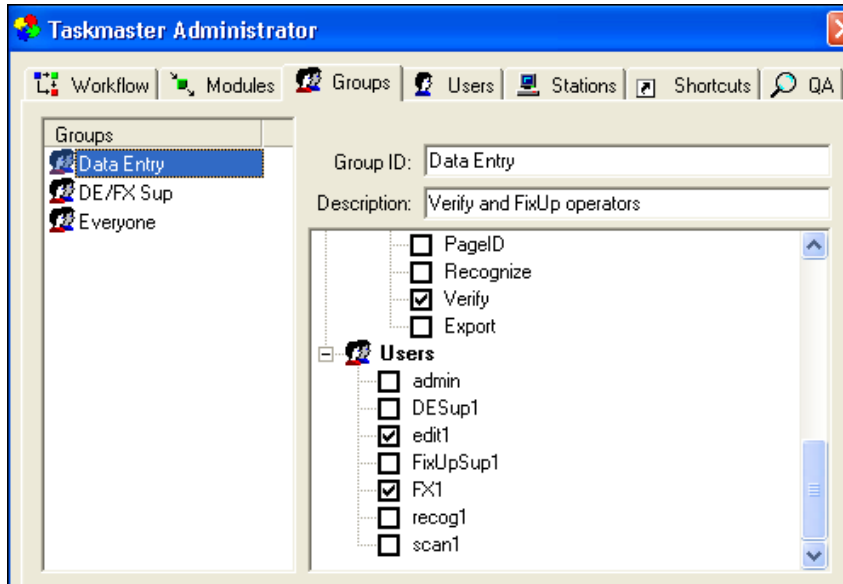

Taskmaster Administrator – *Users tab*

In the *Groups* tab (illustrated on the next page), there are three User Groups:

♦ The *Data Entry* group includes the *edit1* and *FX1* users. The group's members have one only privilege: they can use the **Job Monitor** to "roll back" batches to an earlier task and change the processing status of a batch. The *edit1* and *FX1* operators have permission to run the application's *FixUp Job.FixUp* and *Main Job.Verify* Job/Task Combinations.

♦ The *DE/FX Sup* group consists of the supervisory users – *DESup1* and *FixUpSup1*. They have more **Job Monitor** privileges than the *Data Entry* group, and can use the application's **Station Monitor** and **Run Task** dialog (see the illustrations on Page 22). However, the group's privileges do not include access to the tabs of the **Taskmaster Administrator**.

♦ At the bottom of the **Groups** list, *Everyone* is a catch-all. All users belong to this group, but the group does not have administrative privileges or Job-Task

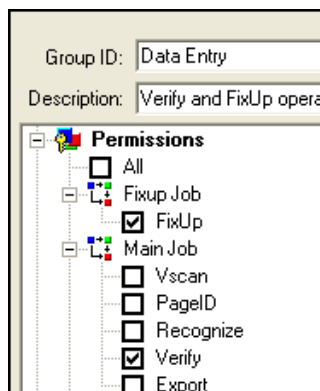permissions. You can, however, remove a user from the *Everyone* group, and you can provide the group with privileges and permissions.

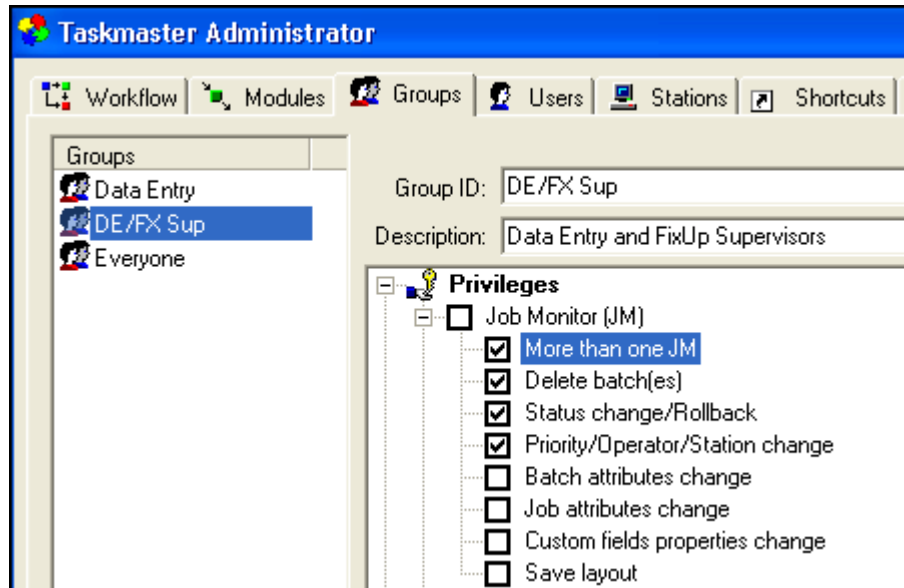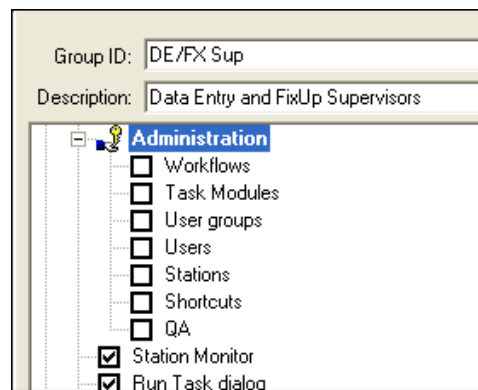**Taskmaster Administrator –** *Groups tab*
Members of the Data Entry Group
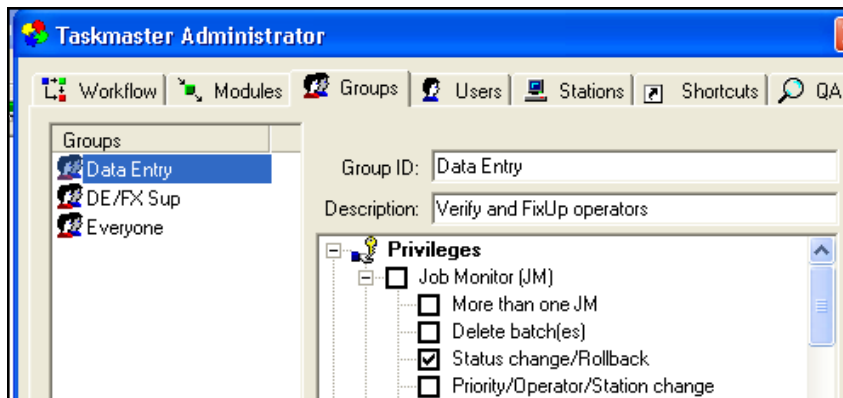
Data Entry Group – *Privilege*

Data Entry Group – *Job-Task Permissions*

DE/FX Sup Group – *Job Monitor Privileges*

DE/FX Sup Group – *Job Monitor Privileges*

Fields and Functions of the Groups Tab

The table below describes the *Groups* tab (illustrated on the previous page.)

Field/Function	Description
Group List	A list of identifying codes representing previously defined User Groups. *Alert! Everyone* is a default User Group without Administrative Privileges and Job-Task Permissions. You can, however, assign privileges and permissions to the group, and these will be picked up by its users. *Taskmaster* will automatically assign a new user to this group.
Group ID	A unique code you assign to identify a User Group. When you define a new User Group and press the Apply button at the bottom of the *Taskmaster Administrator*, *Taskmaster* automatically adds the Group ID to the **Group List** field.
Description	A brief description of the Group's nature and membership.
Qualifications	This dynamic field lists an application's **jobs** and **tasks**, and its **users**. Next to each item is a check box; activating the check box adds the item to the User Group's qualifications. If there are changes to an application's jobs, tasks and users, the **Qualifications** field immediately incorporates the results.
Privileges	Administrative privileges covering use the *Job Monitor* and other runtime dialogs, tabs of the *Taskmaster Administrator*, and special communications dialogs.
Permissions	This is a two-level list: Selecting *All* grants members of this User Group permission to carry out all tasks in all jobs. Alternatively, you can select one or more tasks in one or more jobs. *Very important!* The permissions you assign to a User Group do *not* appear as selections in the User Definitions of individual members.
Users	A list of User IDs representing the application's active users. Selecting a user automatically accords him or her the administrative Privileges and Job-Task permissions you checked above.

How to Define a User Group

There's a chicken-and-the-egg relationship between definitions of users and User Groups:

- A User Definition (Page 4) assigns the user to one or more User Groups.

- A User Group Definition includes previously defined users as members.

As a guideline, *we recommend* that you construct an application's User Definitions before you set up your User Groups.
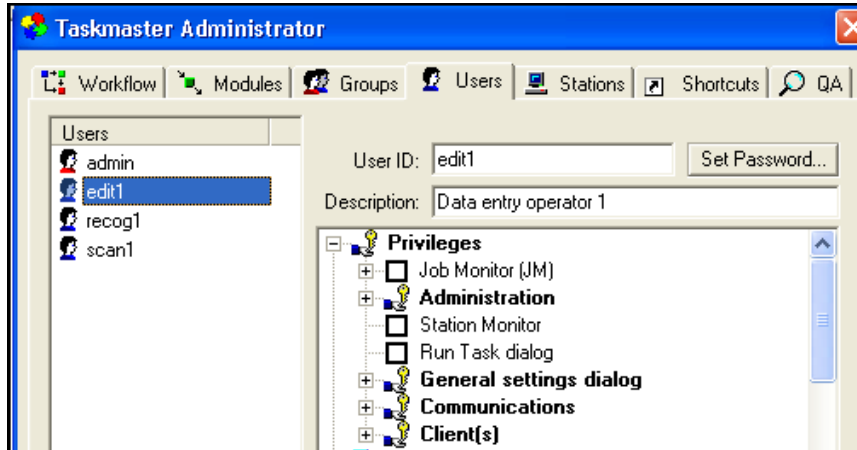
To define a User Group, take these steps:

Step	Action
1.	Select **Groups** from the *Taskmaster Window's* **Settings** menu.
2.	When the *Taskmaster Administrator's Groups* tab appears, press the Add button at the bottom of the tab to clear the interactive fields; this step will also "gray out" the **Qualifications** field on the right.
3.	Enter a unique **Group ID.**
4.	Add a brief **Description** of the User Group.
5.	Press the Apply button.
6.	Read *Taskmaster's* message about the updating procedures; click on the *Message Pad's* Ok button.
7.	Verify that *Taskmaster* has added the **Group ID** to the **Groups List**.

To Define a User Group (continued)

Step	Action
8.	At the bottom of the **Qualifications** list, check the users that will belong to the group.
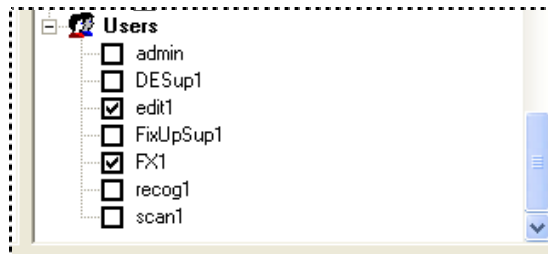
9.	Back at the top, specify which administrative privileges, if any, you are according to members of the group.
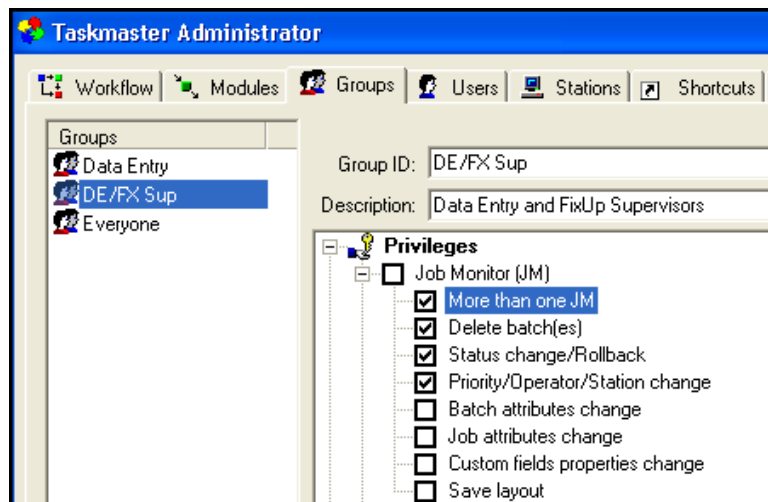
10.	Use the **Permissions** list to assign Job-Task permissions to the group (and all its members!)

Step	Action
11.	Review the new group's criteria – its members, privileges and Job-Task permissions.
12.	Press the Apply button at the bottom of the *Taskmaster Administrator.*
13.	Review the content of the following message and click on the OK button.

Taskmaster Client

Settings have been saved and changed for current session.

Other users currently logged into Taskmaster will need to log out and log back in to see these changes.

OK
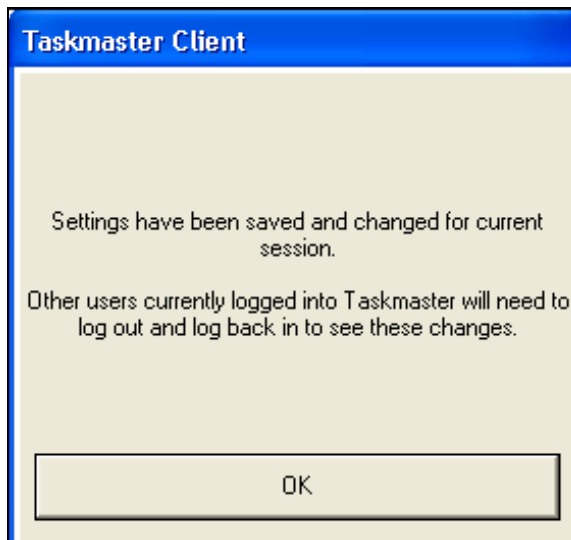
14.	Press the Taskmaster Administrator's Done button.

LDAP Group Authentication

LDAP Authentication in *Taskmaster* supports enterprise management of users in groups, with either Active Directory (AD) or any LDAP provider. Group permissions are set in *Taskmaster*, then a Domain System Administrator assigns users to groups. For example, a *Taskmaster* group named **TMVerify.mydomain** matches the TMVerfiy group in AD/LDAP.

This feature replaces the previous "NT Authentication" method which is no longer supported. A Technical Note is available with details about this feature.

Station Security

Overview

Settings in the *Stations* tab authorize the involvement of the individual computers from which users run tasks. To access this tab, select **Stations** from the **Settings** menu.

✓ The **Datacap Taskmaster Client** Installation and Configuration process sets up "client" software on each workstation. However, a workstation *cannot* use this software until the Administrator has provided it with a Station Definition authorizing its activities. In addition, an authorized user *cannot* access *Taskmaster* unless both user *and* workstation have comparable authorization.

The table on the next page describes the settings of the *Stations* tab. As you review these descriptions, consider the following points:

Security parameters designate limits. If a User Definition (Page 4) grants an operator the right to process a particular set of Job/Task Combinations but the Station Definition's permissions allow only a few of those combinations, the user's scope is limited by the Station Definition. The same rule applies if a *User* Definition is more restrictive than a corresponding *Station* Definition.

Station Definitions are not transferable. The Administrator's User ID and Password gives you the ability to construct Station Definitions from any workstation in your Datacap network. However, an individual Station Definition does not take effect until you have accessed it from the workstation to which it applies *and* have clicked on the *Stations* tab's **This station** button (see the illustration).
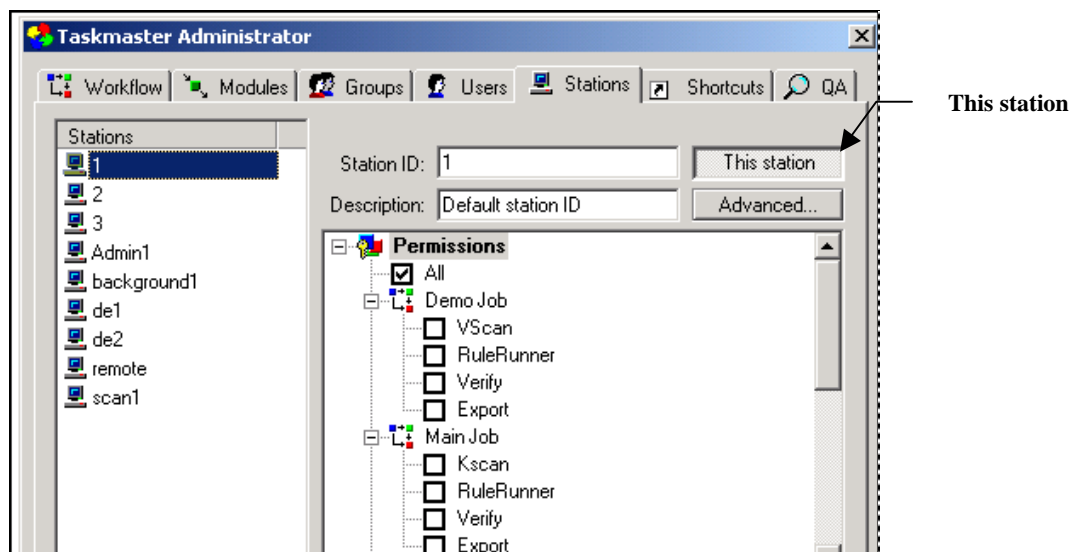
Taskmaster Administrator—*Stations tab*
<u>Station List – New Application</u>

Is this a virtual station? If your **Datacap** configuration includes a Taskmaster Web Site, remote workstations can use the Web Site to access the application and carry out certain, very specific Job/Task operations. However, a station can be part of the *Taskmaster Web* network only if you set it up as a "virtual" station. Page 29 briefly introduces virtual workstations; the *Guide to Taskmaster Web* contains complete explanations.

Fields and Functions of the Stations Tab

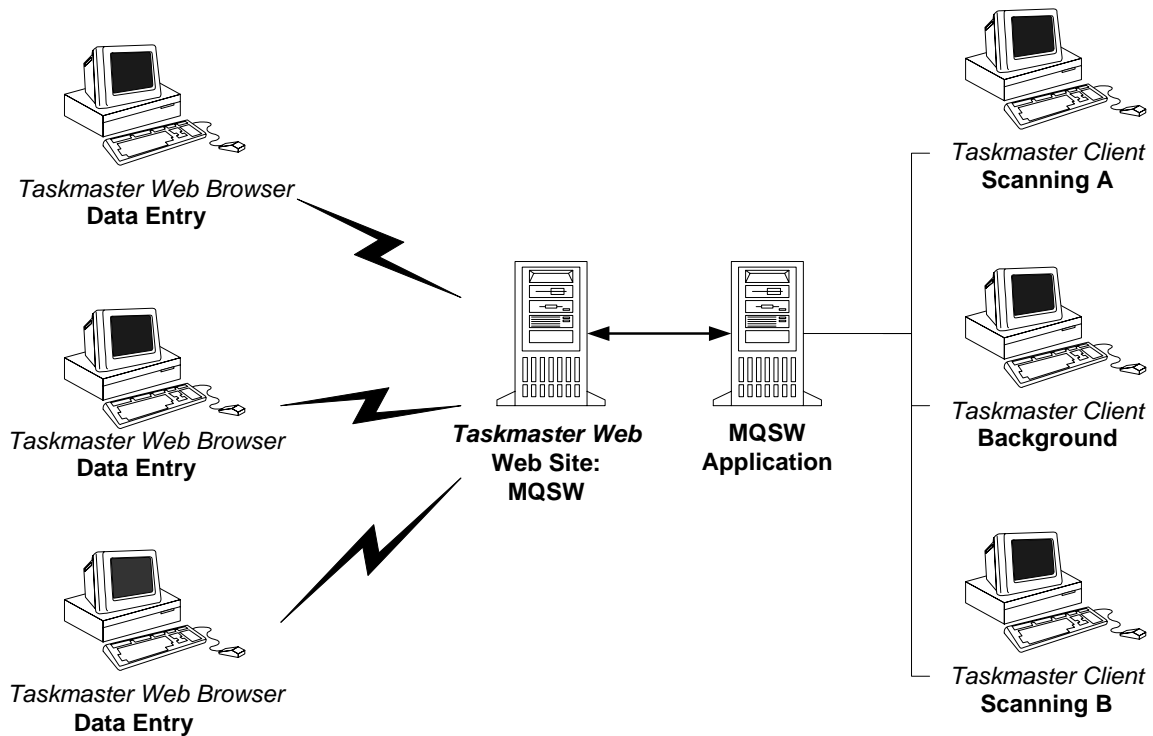The table below describes the fields and functions of the *Stations* tab.

Field/Function	Description
Station List	A list of Station IDs that represent active workstations. When you highlight a Station ID in this list, the *Stations* tab displays the specifications of that Station Definition. *Important:* the *Taskmaster Application Wizard* (Chapter 4) provides *skeletal* definitions for a number of stations.
Station ID	A unique code you assign to the Station Definition. Activating the **This Station** check box automatically assigns this Security code to the current computer. You can, however, assign multiple Station Definitions to one computer.
This Station button	Assigns this Station Definition to the computer on which you are working.
Advanced button	Accesses the *Virtual Stations* dialog. Settings in this dialog apply the Workstation Definition to remote computers serving as *Taskmaster Web* clients (Page 29).
Description	A brief description of the workstation and its role. Although this is not a required entry, a description helps clarify the use of the workstation.
Permissions	The set of Job/Task Combinations authorized by this Station Definition. When you assign a Station Definition to a particular computer, the computer can carry out *only* the jobs and tasks you've selected.
Add button	Clears the fields of the *Stations* tab so you can prepare a new Station Definition (see the next page).
Remove button	Deletes the Station Definition associated with a Station ID you've highlighted in the **Stations** list.

Taskmaster Administrator – Stations tab (continued)

Field/Function	Description
Copy button	Retrieves the *Copy Stations* dialog box. You can use this box to create a new Station Definition by copying the specifications of the Station Definition you've selected from the **Station List.**
Done button	Confirms new or modified Station Definition settings and closes the *Stations* tab.
Apply button	Adds the identity of a new Station Definition to the application's database, and activates the **Permissions** list.
Help	Accesses *Taskmaster* Help.

Virtual Stations

Suppose that you decide to add *Taskmaster Web* capabilities to your **Datacap Taskmaster** configuration – and three Data Entry operators who work from computers at home. The new configuration might look something like this:


Taskmaster Web Browser
Data Entry

Taskmaster Web Browser
Data Entry

Taskmaster Web Browser
Data Entry

Taskmaster Web
Web Site:
MQSW

MQSW
Application

Taskmaster Client
Scanning A

Taskmaster Client
Background

Taskmaster Client
Scanning B

✓ Although each of the ***standard*** Taskmaster Clients on the right has a distinct Station ID representing a unique Station Definition, the remote clients on the left are all covered by a single Station Definition (*Data Entry*).

The uniformity on the *Taskmaster Web* side results from:

- The completion of single Station Definition which gives the remote stations permission to carry out identical Job/task combinations;

- The Administrator's use of settings in the ***Virtual Stations*** dialog.

The definition of the *Data Entry* station allowed only one Job/Task Combination: Web Main Job.Verify. (In today's *Taskmaster Web* environment, however, remote stations can launch most Job/Task Combinations!)
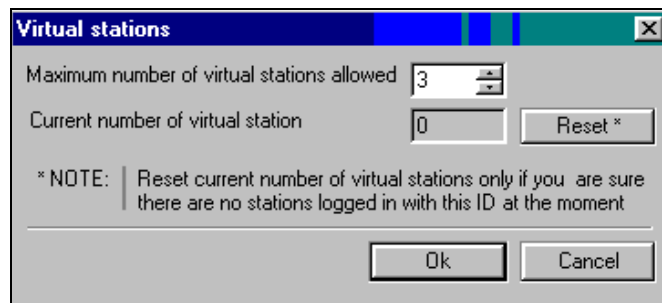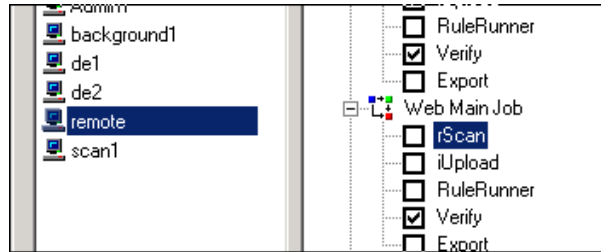
Virtual Stations Dialog

The specifications in the illustration above limited the number of remote *Data Entry* stations in the *Taskmaster Web* network to "3."

When the Administrator applied the *Data Entry* definition to a specific remote computer and clicked on the This Station button (see the next page), the computer assumed the *Data Entry* attributes – and *Taskmaster* automatically checked to be sure that the addition of this computer did not exceed the "Maximum number of virtual stations allowed."

☛ ***Don't forget:*** The *Guide to Taskmaster Web* explores all aspects of this environment's Web Sites and operations.

How to Construct a New Station Definition

To set up a new Station Definition and assign it to a specific workstation within your **Datacap** network, take these steps:

Step	Action

15.   From your Administrator's workstation, access the *Stations* tab of the **Taskmaster Administrator.**
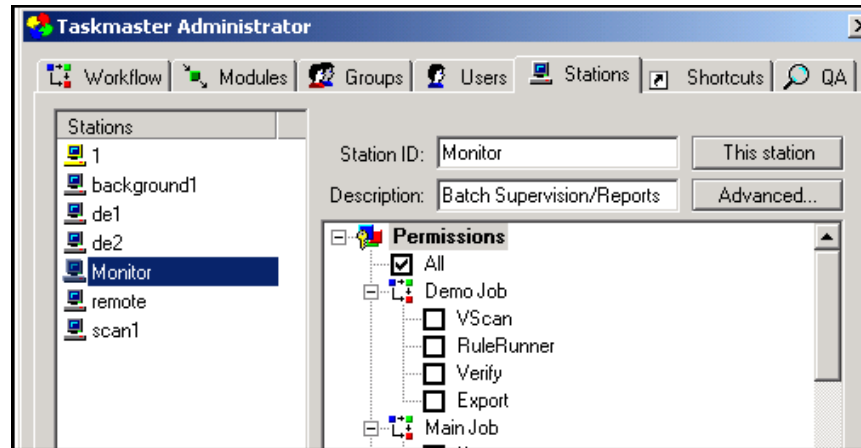
16.   Press the Add button to clear the fields of the *Stations* tab.

17.   Enter a unique **Station ID** code.

18.   Provide a brief **Station Description**.

19.   Press the Apply button.

20.   Verify that *Taskmaster* has added the **Station ID** to the **Stations** list.

21.   From the *Permissions* hierarchy, select those Job/Task Combinations this station may initiate.

22.   If the Station Definition covers the computer you're working from, press the **This Station** button.

23.   Review your settings.

24.   Press the Done button.

✓   In the illustration above, a **user** with permission to run *All* Job/Task Combinations can launch any task from this station – *as long as* the shortcut icon he or she is using has the same permission. For details, see the next page.

Job-Task Shortcuts

Overview

The *Shortcuts* tab defines the Job-Task processing shortcuts that appear in the secondary *Operations* window of the *Taskmaster Window* (Chapter 4).

A shortcut (and its corresponding icon) link an ***authorized*** user to a set of Job/Task Combinations for which he or she is responsible.

✓ The *Taskmaster Application Wizard* (Chapter 4) automatically supplies icons that have been linked to the default jobs and tasks of the new application. ***Be sure*** to study the properties of any icon you intend to use; if you remove a Job/Task Combination from a Workflow Hierarchy (Chapter 4), remove the corresponding icon or modify its properties accordingly.
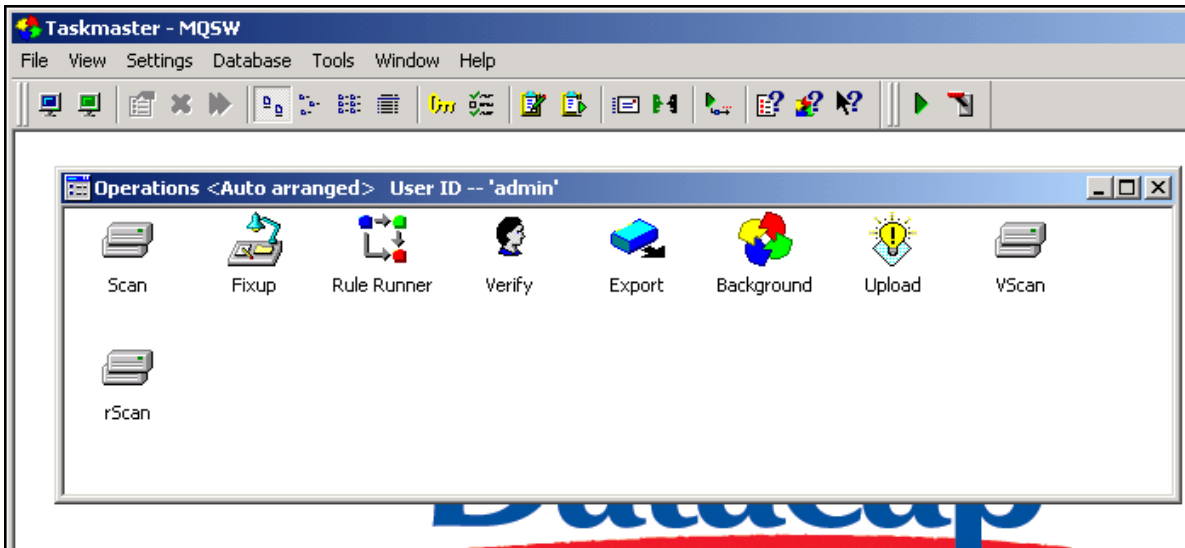

**Taskmaster Window – *with secondary***
Operations Window

After your jobs and their tasks have been fully defined (Chapter 4), double-clicking on an icon with the ***left*** button of your mouse initiates a sequence that begins the batch processing activity of jobs and tasks represented by the icon.

If you click on the shortcut icon with the ***right*** button, the dialog at the top of the next page appears. Selecting **Properties** from the list of options accesses the second dialog.

Although the dialogs' functions differ somewhat, the information they hold comes from the settings you assign when you define the shortcut. For more about the ***Shortcut Properties*** dialog, see Page 39.

Chapter 5: Application Security
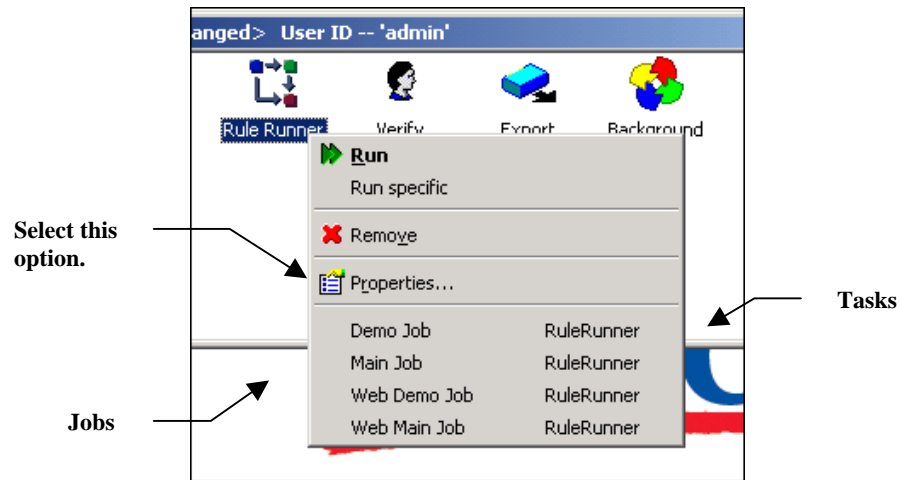
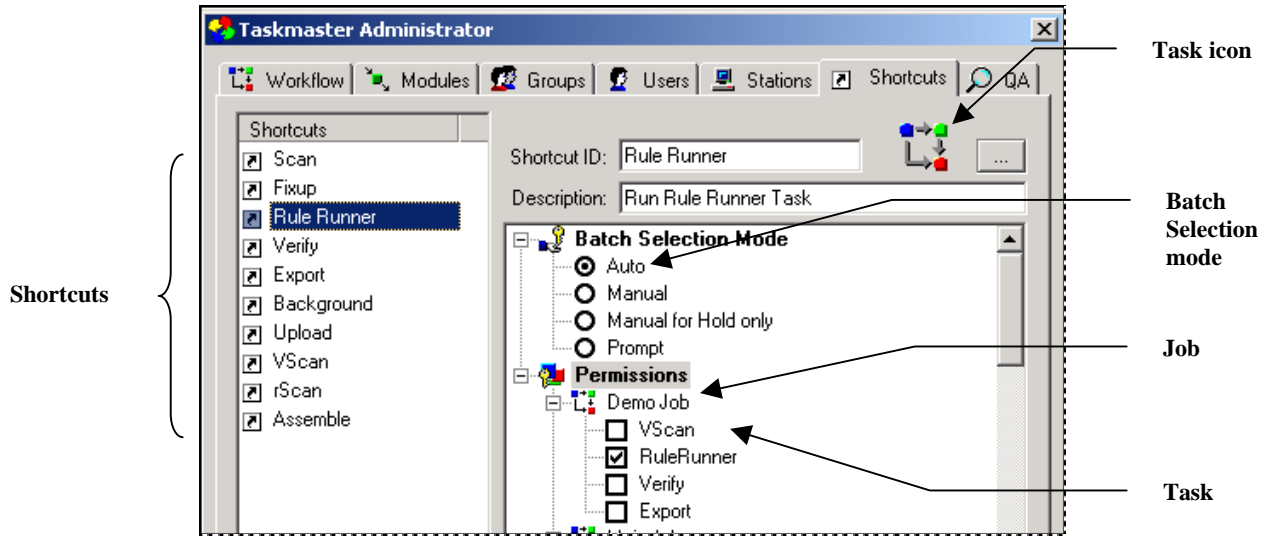**Shortcut Actions dialog – *Rule Runner Icon***
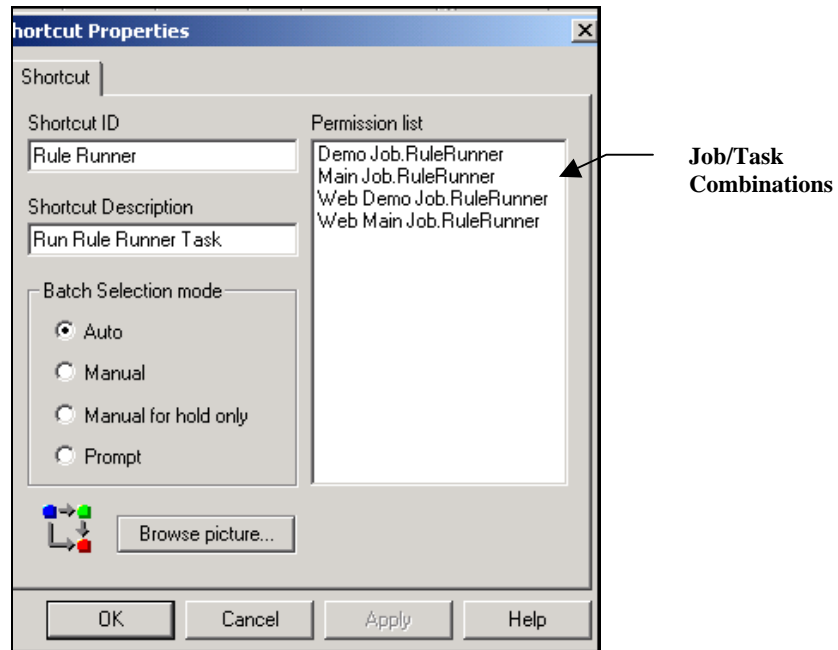
Shortcut Properties Dialog – *RuleRunner Icon*

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Fields and Functions of the Shortcuts Tab

The *Shortcuts* tab has these elements:

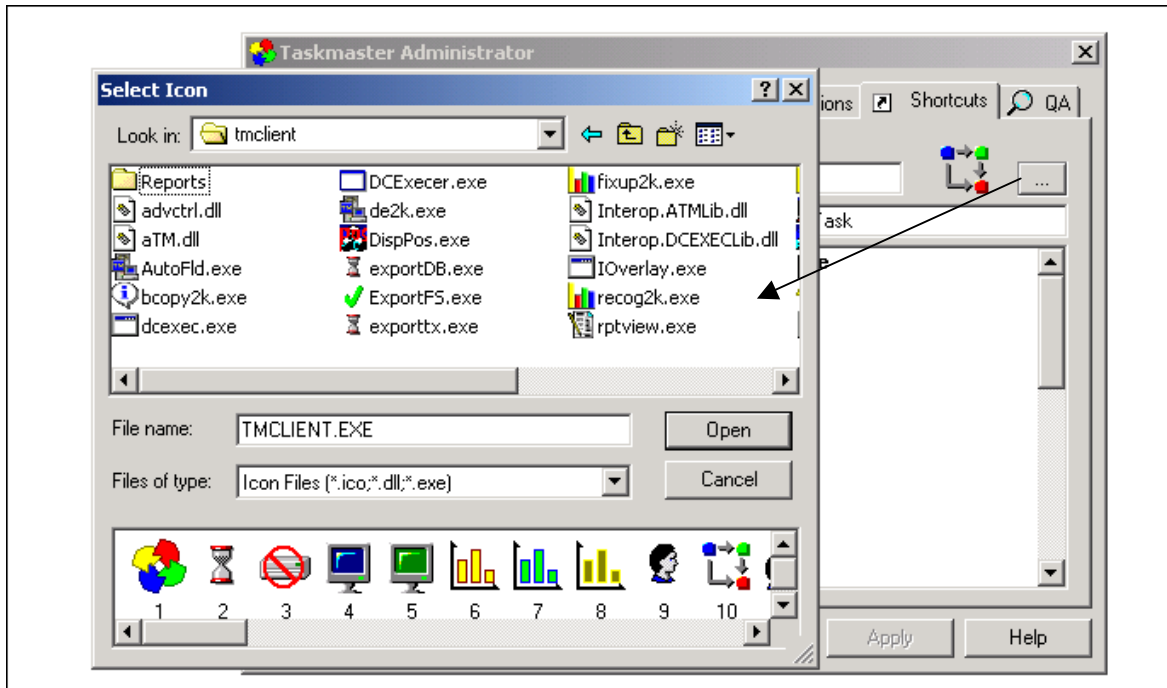| Field/Function	Description
Shortcut List	A list of Shortcut IDs representing active Shortcut Definitions.
	Alert! The set up of a new application (Chapter 4) *automatically* supplies you with five default shortcuts and their corresponding icons. A default icon can appear in the application's **Operations** window only *after* you provide it with specific Job-Task permissions.
Shortcut ID	A unique code you assign to identify this Job/Task shortcut.
Description	A brief description of the shortcut's role and coverage.
Batch Selection Mode	These radio buttons represent alternative responses to an operator's selection of a shortcut icon. When defining a shortcut, you *must* choose a **Batch Selection Mode.**
	The descriptions which follow summarize each mode.
Auto	Automatically selects and begins to process the next batch in line for **any** of the shortcut's Job/Task Combinations.
	This "line" of waiting batches is known as the icon's Job/Task **queue.**
	Because this mode initiates behind-the scenes activity, it is usually a property of shortcut icons representing *unattended* tasks…tasks that require little if any operator intervention.
Manual	Retrieves the **Batch Selection** dialog.
	The **Batch Selection** dialog lists every batch in the icon's queue. Before processing can begin, the operator *must* first select a batch from the list.
Manual for Hold Only	Automatically processes all batches in the icon's queue *except* those with a *Hold* status.
	A shortcut with this Batch Selection Mode operates in a two-step sequence. The first step retrieves the **Batch Selection** dialog, which lists batches in the queue with a *Hold* status. *Taskmaster* **cannot** automatical*y* handle the remaining batches until you have successfully dealt with these problem batches.

Taskmaster Administrator – *Shortcuts Tab*

Shortcuts Tab (continued)

Field/Function	Description
Prompt	Displays a modified version of the *Shortcut Properties* dialog each time the task selects a batch ***automatically***. This allows an Administrator to change the **Batch Selection Mode** setting before the task processes the next batch, and can be a helpful testing device.
Permissions	A list of the application's jobs, and the tasks assigned to each job (Page 13). If you place a check in the check dialog next to a Task ID, *Taskmaster* adds the Job/Task Combination to the shortcut. This Job/Task Combination then appears in the **Permission List** of the *Shortcut Properties* dialog.
Shortcut Icon	The graphic of the shortcut icon you've highlighted in the **Shortcuts List**. The example above shows the default graphic that represents Rule Runner tasks.

Shortcuts Tab (continued)

Field/Function	Description
Ellipsis button (…)	Accesses the *Select Icon* dialog (illustrated on the next page). A variation of the standard Windows *Open File* dialog, the *Select Icon* dialog has an additional field, and behaves a little differently. An icon is the shortcut's interactive connection to a user – an operator, Supervisor or Administrator who is initiating a task. When you define a new shortcut (Page 37), clicking on the Ellipsis button retrieves the *Select Icon* dialog. In the **Look in** field, open the **Datacap** directory's **tmclient** folder. After a moment, the *Select Icon* dialog fills its **Icons** field with more than forty cartoons it extracts from the **tmclient.exe** file. To add an icon to a shortcut (or change an icon)*:* • Open the **Datacap** directory's **tmclient** folder. • Be sure that **tmclient.exe** is specified in the **File Name** field. • Select a picture from the **Icons** field of the *Select Icon* dialog. • Click on the Open button.
Add button	Clears the fields of the *Shortcuts* tab so you can add a new Shortcut Definition.
Remove button	Deletes the Shortcut Definition of a shortcut you've highlighted in the **Shortcuts List**.
Copy button	Retrieves the *Copy Shortcuts* dialog. You can use this dialog to create a new Shortcut Definition by copying the specifications of the shortcut you've selected from the **Shortcuts List** (Page 34). *Alert!* For most applications, the shortcuts in the *Operations* window cover specific Job/Task Combinations and do not share properties. As a result, the Copy function is useful only during the installation and testing of a new application.
Done button	Confirms new or modified Shortcut Definition settings and closes the *Shortcuts* tab.
Apply button	Adds properties to a new Shortcut Definition (Page 37).
Help button	Accesses *Taskmaster* Help.

Selelct Icon dialog

How to Define a New Job/Task Shortcut

To set up a new shortcut linking users with one or more Job/Task Combinations, take the steps below.

| Step	Action
25.	Select **Shortcuts** from the *Taskmaster Window's* **Settings** menu: the *Shortcuts* tab of the *Taskmaster Administrator* will appear on your screen.
26.	Press the Add button to clear the tab's fields.
27.	Enter a unique **Shortcut ID**.
28.	Add a brief **Description** of the shortcut and its scope.
29.	Press the Apply button.
30.	Confirm that *Taskmaster* has added the new Shortcut ID to the **Shortcuts List** and has activated the **Batch Selection Mode** and **Permissions** options.

To Define a Job/Task Shortcut (continued)

| Step	Action
31.	Select a **Batch Selection Mode.** *Remember:* This mode will be in force every time a user double-clicks on the shortcut's icon.
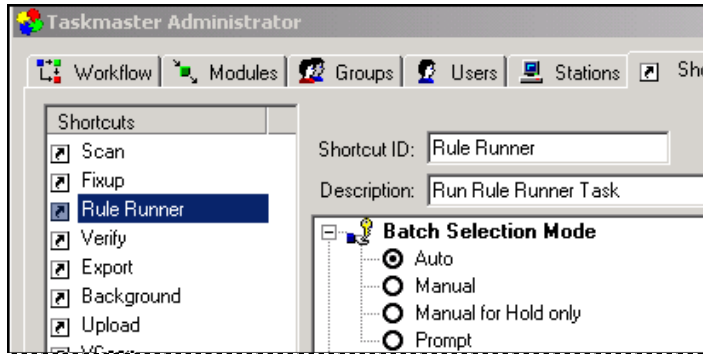
Step	Action
32.	From the **Permissions** list, select the shortcut's Job/Task Combinations.
33.	Click on the Ellipsis button to access the *Select Icons* dialog. Select a graphic match the task and click on the OK button.
34.	Press the Apply button at the bottom of the *Shortcuts* tab, then the Done button to return to the *Taskmaster Window.*
35.	Open the *Operations* window to be sure the new shortcut icon is in place. *Alert!* In a crowded window, the new icon may "hide" behind another icon. If you do not see it immediately, use your cursor to nudge the others to the side.
36.	Access the *Shortcut Properties* dialog (Page 39) to confirm the shortcut's attributes.

✓ *Important!* The convergence of identical Job/Task permissions in the definitions of both a user and a shortcut icon means that this user will see and can use the icon. In the example below, the Scan operator and the Scan shortcuts are authorized to run *only* Scan tasks – *if* the workstation has identical permissions!
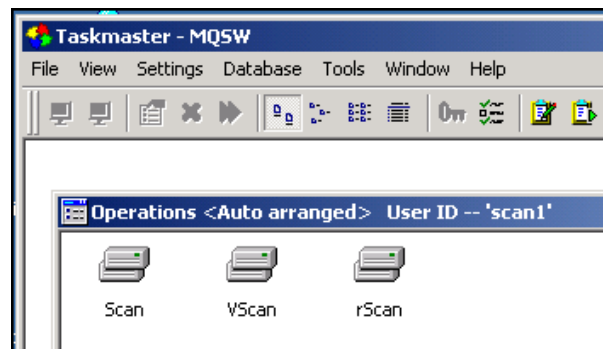
Shortcut Properties

Once a shortcut has been defined and its icon has a place in the **Operations** window, right-clicking on the icon, and selecting **Properties** in the **Shortcut Actions** dialog will present you with the **Shortcut Properties** dialog. This dialog is a source of both information and action, and is available **only** to users to whom you have granted a *Shortcuts* privilege (Page 8).
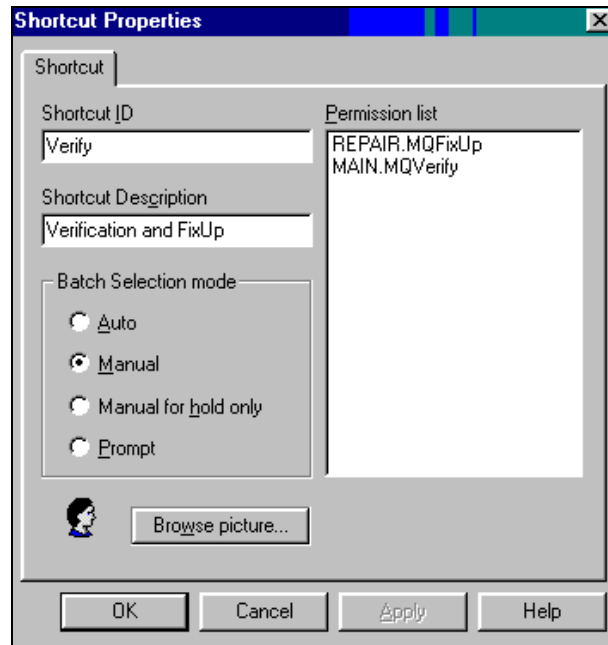
Shortcut Properties Dialog

The data and settings of this dialog duplicate the specifications of the *Shortcuts* tab for this shortcut. However, you can modify any setting **except** a Job/Task permission from the **Shortcut Properties** dialog; the changes will appear in the *Shortcuts* tab as well.

Clicking on the Browse button brings you immediately to the **Select Icon** dialog, where you can assign a different graphic to the shortcut.