Affymetrix® Data Transfer Tool User's Guide
Version 1.1

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Affymetrix® Data Transfer Tool User's Guide

The Affymetrix® Data Transfer Tool (DTT) provides a convenient way to transfer data in and out of GCOS for archiving and sharing.

The DTT allows you to:

- Transfer data in and out of a computer with GCOS installed on it.
- Transfer data into a computer with MAS 5.x installed on it.
- Unpack CAB and DTT Archive files on a computer with no Affymetrix system on it.

The DTT provides the following functionality:

- Ability to exclude DAT files
- Ability to set a variety of span file sizes to save DTT Archives onto removable media
- Smarter Unpacking – senses the environment (MAS vs. GCOS) and unpacks the correct file formats
- Greater Backward Compatibility
- Filter data from DTT Archive or flat files for transferring IN
- Added file types for quicker archiving and unpacking
- Detection and resolution of conflicts with templates, samples, and usersets when using DTT Archive/Flat Files

This guide provides information about:

Installing the Data Transfer Tool

When working with GCOS Server 1.0, GCOS Server 1.2.x and higher versions of GCOS Server, the Data Transfer Tool has to be installed on all GCOS clients and the GCOS Server. When working with Microarray Suite, the Data Transfer Tool should be installed only on the client.

To install DTT:

1. Insert the Data Transfer Tool CD-ROM.

    A. Click **Start → Run**.

    B. Type *<cd drive letter>*:\setup.exe.

    C. Click **OK**.

    The Install Welcome window opens (Figure 1).
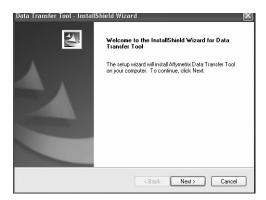
Figure 1
Install Welcome window

2. Click **Next**.

    The Validation box opens (Figure 2).

Figure 2
Validation dialog box

3. Click **OK**.

   The Affymetrix, Inc. End User License Agreement opens
   (Figure 3).
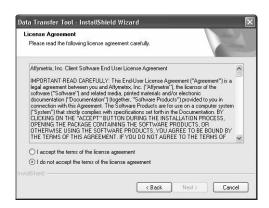
Figure 3
License Agreement window

4. Review the contents and click the **I accept the terms of the
   licensing agreement** button and click **Next** to accept the terms
   of the licensing agreement.

   If the **I do not accept the terms of the licensing agreement**
   option is selected, the installation program will exit and DTT will
   not be installed.

   After you accept the End User License Agreement, the Choose
   Destination Location window opens (Figure 4).
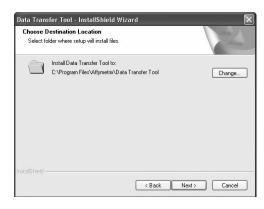
Figure 4
Choose Destination Location window

The Choose Destination Location window is displayed only when installing the application on a system with Microarray Suite 5.x or on a system with no Affymetrix software installed.

5. Select the destination where the Data Transfer Tool will be installed. C:\Program Files\Affymetrix\DTT is the default location.

NOTE **When installing on a system with Microarray Suite, the target directory cannot be the MAS 5.x program files directory. On a system with GCOS, the Data Transfer Tool will be installed to the GCOS directory.**

To select a different location:

A. Click Change.

The Choose Folder dialog box opens (Figure 5).

Figure 5
Choose Folder window

> **B.** Select the destination where DTT will be installed and click **OK**.

6. In the Choose Destination window, click **Next**.

The Ready to Install the Program window opens (Figure 6).
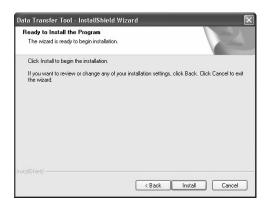
Figure 6
Ready to Install Program window

7. Click **Install** to install the program.

The **Setup Status** window displays the progress of the install (Figure 7).
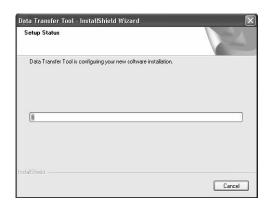
Figure 7
Setup Status window

After the files are copied, the InstallShield Wizard Complete window opens (Figure 8).
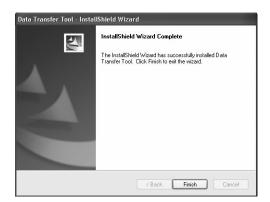
Figure 8
InstallShield Wizard Complete window

8. To exit the InstallShield Wizard, click **Finish**.

9. If working with a GCOS Server, repeat the installation on the server.

Using the Data Transfer Tool

To start the Data Transfer Tool:

- Click the Microsoft® Windows® **Start** button 🪟Start and select **Programs → Affymetrix → Data Transfer Tool**.

  At start up, the Welcome window displays the initial options.

  Different options are displayed when using DTT on:

  - GCOS system (Figure 9)
  - MAS 5.x/No system (Figure 13)
  - No System (Figure 14)

NOTE 📎 **When working with GCOS 1.2 and higher software, the Data Transfer Tool can be invoked from the file menus of the applications.**
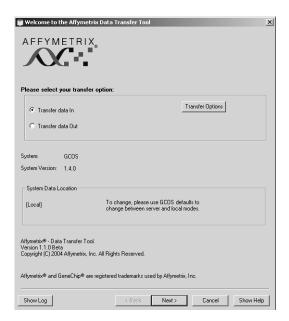
Figure 9
Welcome Screen for DTT on computer with GCOS installed

GCOS SYSTEM WELCOME SCREEN

When used with a GCOS system, the DTT allows you to transfer the following types of data:

- GCOS Data
- Mining Data stored in an AADM database

NOTE **Before transferring data IN from a Mining (AADM) DTT Archive or CAB file, you must create a new, empty mining (AADM) database in GCOS Manager. For more information, refer to the GCOS Manager documentation.**

You can transfer data in different formats:

- DTT Archive files
- Flat Files
- CAB files
- MAS files (transfer IN only)

  For more information about the different input and output data formats, see *DTT Options Dialog Box for GCOS System, on page 10*.

In the Welcome page, you can:

- Select Transfer Data In or Transfer Data Out operations
- Open the DTT Options page to select input and output data formats (see page 10)
- Review information about your system:
  - Affymetrix system installed on your computer
  - The system version
  - System data location: The GCOS system (Local or Server) to which the data will be transferred. When using DTT with GCOS, use GCOS to switch between Local and Server mode.

Use the buttons at the bottom to:

Show Log	Show the log for all transfer operations.
Back	Return to the previous step (disabled in this screen).
Next	Go to the next step.
Cancel	Close the dialog box.
Show/Hide Help	Display or conceal the Help page.

To select the operation:

1. Select whether you want to:
   - Transfer data IN to GCOS.
   - Transfer data OUT of GCOS.

2. If you want to specify a file type for your transfer, click **DTT Options**.

   The DTT Options Page opens (see below).

3. Click **Next**.

   The appropriate page opens.

DTT Options Dialog Box for GCOS System

Click the appropriate tab to:

- Select file types for Transfer IN (see below)

- Select file types for Transfer OUT (see page 12)

DTT Options Page: Transfer IN Tab for GCOS System

The Transfer In tab allows you to choose between the following data input formats (Figure 10):

- DTT Archive/Flat Files: GCOS Process Data or Publish Database contents (DTT Archive format only)

  Select this option to transfer in data from DTT Archive files or flat files. The flat files or DTT Archive file must have the associated XML file(s) with the GCOS project and sample information. The DAT/CEL/CHP data will be transferred into GCOS under the appropriate project/sample and the data files will be converted to the appropriate GCOS format.
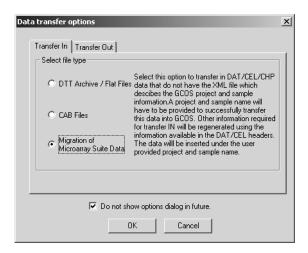
Figure 10
GCOS System Data Transfer Options dialog box, Transfer IN Tab

IMPORTANT ❗ **When using DTT Archive files stored on CDs, it is highly recommended that users copy all contents of the CD to a local drive and then import the contents.**

NOTE 🖘 **Before transferring Mining data IN, you must create a new, empty mining (AADM) database in GCOS Manager. For more information, refer to the GCOS Manager documentation.**

- CAB Files: GCOS Process Data or Publish Database contents

  Select this option to transfer in data from CAB files. The DAT, CEL and CHP data contained in the CAB file will be transferred to GCOS into the appropriate project/sample in GCOS. The data will be transferred into GCOS under the appropriate project/sample and files will be converted to the appropriate GCOS format.

- Migration of Microarray Suite Data

  Select this option to transfer in DAT/CEL/CHP data that do not have the XML file with the GCOS project and sample information. A project and sample name will have to be provided to successfully transfer this data into GCOS. Other information required for transfer IN will be regenerated using the information available in the DAT/CEL headers. The data will be inserted under the user provided project and sample name.

To select the input format:

1. Select the radio button for the file type you wish to use.
    - DTT Archive Files
    - Flat Files
    - CAB Files

2. Click **OK** in the Data Transfer Options dialog box.

DTT Options Page: Transfer OUT Tab for GCOS System

The Transfer Out tab allows you to choose between the following data output formats (Figure 11):

- DTT Archive (GCOS Process Data and Publish Database contents)

  Select this option to transfer data out to flat files which are then packaged into DTT Archive file(s). The DTT Archive file(s) contain DAT, CEL, and CHP data files, along with an XML file with information on the GCOS sample and project under which the experiment was created. Use this format to preserve all GCOS information when transferring the data. DTT Archive file options will allow the DTT Archive file to be broken into smaller span files if required.

  DTT Archive files get a .DTT extension.

- Flat Files (GCOS Process Data only)

  Select this option to transfer data out to flat files that consist of DAT, CEL, and CHP data files, along with an XML file with information on the GCOS sample and project under which the

experiment appears. Use this option to preserve all the GCOS information when transferring the data from one GCOS system to another. The XML files generated using this option have to be transferred with the DAT, CEL and CHP data.

- CAB (GCOS Process Data and Publish Database contents)

  Select this option to transfer data out to CAB files that contain the DAT, CEL, and CHP data files, along with a text file with information on the GCOS sample and project under which the experiment appears. Use this option when CAB files are required and it is necessary to preserve all the GCOS information when transferring the data across GCOS systems.

  CAB files get a .CAB extension.
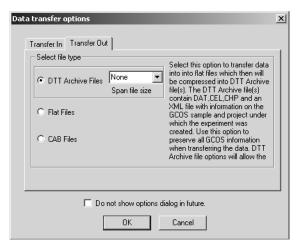
Figure 11
GCOS System Data Transfer Options dialog box, Transfer Out tab

To select the output file format:

1. Select the radio button for the file format you wish to use.

   - DTT Archive Files

If this file type is selected, you can choose a span file size from the drop-down list to match the capacity of the storage media you are using.

- Flat Files
- CAB Files

If you select CAB, you will see a dialog box (Figure 12):

Figure 12
Data Transfer Options dialog box, Transfer Out tab

    A. Select the **I understand DTT Archive** is a better option checkbox.

    B. Click **Yes**.

2. Click **OK** in the Data Transfer Options dialog box.

MAS 5.X AND NO SYSTEM WELCOME SCREEN
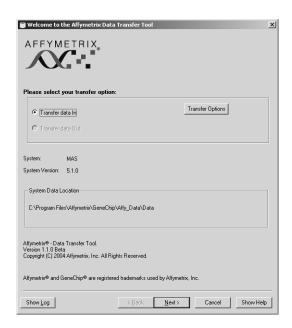
Figure 13
Welcome Screen for MAS 5.x System

When used on a computer with MAS installed, the Data Transfer Tool allows you to transfer GCOS data and Mining data in DTT Archive, Flat File, or CAB formats (Figure 13).

When installed on a computer with no Affymetrix system installed, the DTT allows you to unpack data in CAB and DTT Archive formats and transfer it to a selected directory (Figure 14).

Figure 14
Welcome Screen for No System

NOTE **You cannot use DTT to transfer data Out of computers with MAS 5.x or No System installed.**

In the Welcome page, you can:

- Open the DTT Options page to select input data formats (see page 18).
- Review information about your system:
  - Affymetrix system installed on your computer (MAS or No System)
  - The System Version

- System data location: The destination folder to which the data will be transferred.

  When using DTT with Microarray Suite, this value defaults to the location of the data folder in MAS 5.x software. Use the browse button on the next page to change the default destination.

  When using DTT with No system, use the browse button on the Welcome page to change the default destination.

Use the buttons at the bottom to:

Show Log	Show the log for all transfer operations.
Back	Return to the previous step (disabled in this screen).
Next	Go to the next step.
Cancel	Close the dialog box.
Show/Hide Help	Display or conceal the Help page.

To select the operation:

1. If you want to specify a file type for your transfer, click **DTT Options**.

   The DTT Options Page opens (Figure 15).

2. Click the **Browse** button to change the destination folder (No System only).

3. Click **Next**.

   The appropriate page opens.

MAS 5.x and No System DTT Options Page: Transfer IN Tab
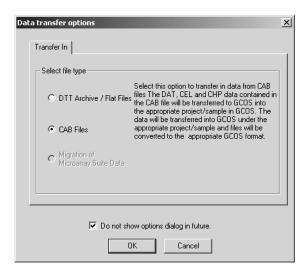
Figure 15
MAS 5.x and No System Data Transfer Options dialog box: Transfer In tab

The Transfer In tab (Figure 15) allows you to choose between the following data input formats:

• DTT Archive/Flat Files: GCOS Process Data or Publish Database contents (DTT Archive format only)

Select this option to transfer in data from DTT Archive files or flat files. The flat files or DTT Archive file must have the associated XML file(s) with the GCOS project and sample information. The DAT/CEL/CHP data will be transferred into GCOS under the appropriate project/sample and the data files will be converted to the appropriate GCOS format.

IMPORTANT !   **When using DTT Archive files stored on CDs, it is highly recommended that users copy all contents of the CDs to a local drive and then import the contents.**

NOTE ⊝ **Before transferring data IN from a Mining (AADM) DTT Archive file, you must create a new, empty mining (AADM) database in GCOS Manager. For more information, refer to the GCOS Manager documentation.**

- CAB Files: GCOS Process Data or Publish Database contents

  Select this option to transfer in data from CAB files. The DAT, CEL and CHP data contained in the CAB file will be transferred to GCOS into the appropriate project/sample in GCOS. The data will be transferred into GCOS under the appropriate project/sample and files will be converted to the appropriate GCOS format.

NOTE ⊝ **Before transferring data IN from a Mining (AADM) CAB file, you must create a new, empty mining (AADM) database in GCOS Manager. For more information, refer to the GCOS Manager documentation.**

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  Not available when using DTT with MAS 5.x or No System options.

To select the input format:

1. Select the radio button for the file type you wish to use.
   - DTT Archive Files
   - Flat Files
   - CAB Files

2. Click **OK** in the Data Transfer Options dialog box.

TRANSFERRING DATA IN

You can use DTT to transfer Affymetrix data into the following types of systems:

- GCOS System: Transfer data into the Process or Publish databases.

  You can transfer the following types of data into a GCOS system:

  - GCOS Process data into the GCOS database
  - Mining Data into an empty Publish database
  - MAS 5.x data into the GCOS database

NOTE ⊜   **Before transferring data IN from a Mining (AADM) DTT Archive or CAB file, you must create a new, empty mining (AADM) database in GCOS Manager. For more information, refer to the GCOS Manager documentation.**

- MAS 5.x System: Transfer data into MAS 5.x system.

NOTE ⊜   **You cannot transfer Mining data into a computer with MAS 5.x or No Affymetrix System installed.**

- No Affymetrix system installed on the computer: Transfer data into a selected directory.

The system type is automatically detected by DTT.

You can transfer data archived in the following file types:

- DTT Archive files (see page 21)
- Flat files (GCOS Process data only) (see page 21)
- CAB files:
  - Into a GCOS system (see page 41)
  - Into MAS 5.x and No system (see page 50)

- MAS 5.x files (GCOS Process data only): Transfer individual files (EXP, DAT, CEL, CHP) and experiment information generated using MAS 5.x software. If the EXP file is missing, the Data Transfer Tool will try and create an experiment file with the available information.

  For more information about importing MAS 5.x files, see page 41.

NOTE ⊜ **You cannot transfer MAS 5.x files into computers with MAS 5.x or No System using DTT.**

NOTE ⊜ **You must select the file type for transfer on the Welcome screen.**

Transferring DTT Archive/Flat File Data IN to a Computer with GCOS, MAS 5.x, or No Affymetrix System

NOTE ⊜ **You must select the file type for transfer on the Welcome screen.**

To transfer data in DTT Archive or Flat File format into a computer with GCOS, MAS 5.x, or No Affymetrix system:

1. Select data types and data for input (see page 22).

NOTE ⊜ **When using the Flat File format, you can only transfer GCOS Process data.**

2. Review selected data (see page 30).
3. Resolve conflicts with (GCOS Systems only):
   - Templates (see page 34)
   - Samples (see page 36)
   - Usersets (see page 37)

4. Check that conflicts have been resolved and view the progress of the transfer (see page 40).

Transfer DTT Archive/Flat File Data IN to GCOS, MAS 5.x, or No Affymetrix System: Setup

The Setup screen allows you to select DTT Archive and Flat File data for transfer in to a computer with:

- GCOS System
- MAS 5.x System
- No Affymetrix System

NOTE **You must select the file type for transfer on the Welcome screen.**

IMPORTANT **When using DTT Archive files stored on CDs, it is highly recommended that users copy all contents of the CDs to a local drive and then import the contents.**
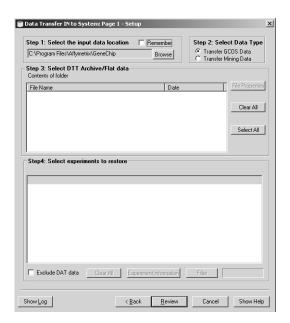
Figure 16
Transfer DTT Archive/Flat File Data IN to GCOS System: Setup

To set up to transfer data IN to the system:

Step 1: Select the input data location

   A. Click the **Browse** button and use the dialog box to select a directory with the DTT Archive/Flat Files for transfer.

   Select the **Remember** checkbox to make this directory the default directory for GCOS.

NOTE   **If you select a directory containing a large number of DTT Archive files, the display of the file list in the Contents of Folder list may be delayed.**

Step 2: Select Data Type

A. Select the Data Type for input.

1) Transfer GCOS Data: transfer archived Process data.

2) Transfer Mining Data: transfer archived Mining data (only available when used with a GCOS system).

NOTE **Before transferring data IN from a Mining (AADM) DTT Archive file, you must create a new, empty mining (AADM) database in GCOS Manager. For more information, refer to the GCOS Manager documentation.**

NOTE **You cannot transfer Mining data to a computer with MAS 5.x or No System installed.**

Step 3: Select DTT Archive/Flat data

The available DTT Archive or Flat Files are displayed in the contents list with the following information:

File Name	Unique ID assigned to the file.
Date	Date when archive was created.

A. Select the DTT Archive or Flat Files from the list:

- Click **Select All** to select all archives and flat data
- Click **Clear All** to clear all selections
- Click on **File Properties** to display the File Properties box for the selected DTT Archive or Flat Files (see page 29).

Step 4: Select Experiments to Restore

Experiments in the selected DTT Archives or Flat Files are displayed in the Experiment list with the following information:

Exp	Experiment ID
Proj	Project ID
Sample	Sample associated with the experiment.
Archive/XML	Archive/XML file containing the experiment information

A. Select the experiments for transfer in the Experiment List.

Use the controls below the box to:

Exclude DAT data	Exclude all DAT files from the transfer process.
Clear All	Clear all selections.
Experiment Information	Display the Experiment Information box for selected files (see page 27).
Filter	Open the Filters dialog box (see page 27).

B. Click **Next**.

- ❑ If you are transferring GCOS data, the Review window open (see page 30).
- ❑ If you are transferring Mining data, the **Select a database** dialog box opens (Figure 17).

Figure 17
Select a Database dialog box

This dialog box displays the available empty Mining (AADM) databases.

    a. Select a database to store the Mining (AADM) data from the list in the box.

    b. Click **OK**.

       A dialog box asks for the password to the mining database.

    c. Enter the password and click **OK**.

The Review window opens (see page 30).

Experiment Information
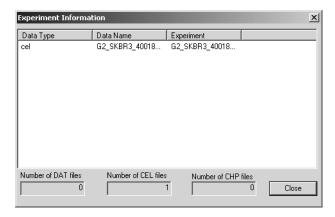
Figure 18
DTT Archive Experiment Information

The Experiment Information dialog box (Figure 18) displays the following information:

Data Type	Type of data (dat, cel, chp).
Data Name	Identifier for the file.
Experiment	Unique ID for the associated experiment.
Number of DAT files	Number of DAT files in the selected archive.
Number of CEL files	Number of CEL files in the selected archive.
Number of CHP Files	Number of CHP files in the selected archive.
Close button	Click to close the Experiment Information box.

Transfer In Filters Dialog Box

To filter displayed experiments:

1. Click the Filter button in the Setup screen (Figure 19).

Figure 19
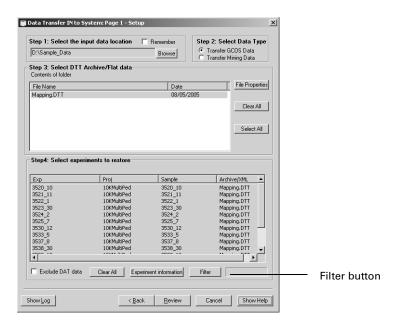Transfer DTT Archive/Flat File Data IN to GCOS System: Setup

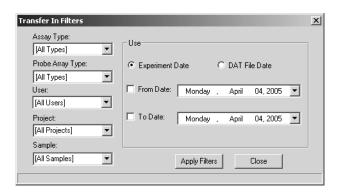The Transfer In Filters dialog box opens (Figure 20).

Figure 20
Transfer In Filters dialog box

2. Select the parameters for the experiments you are interested in from the following:

Assay Type	Type of assay performed.
Probe Array Type:	Particular probe array design used in the experiment.
User:	Person who created or imported the files.
Project	Category assigned in GCOS. Used to group a collection of samples.
Sample	Identifier for the sample, assigned in GCOS.
Use	Use to filter using date ranges.
Experiment Date	Select to filter on date experiment was created.
DAT File Date	Select to filter on date DAT file associated with that experiment was created.
From Date	Start of date range.
To Date:	End of date range.

3. Click **Apply Filters** to display data with the selected parameters; or

Click **Close** to close the dialog box without applying the filters.

Properties Page

The Properties page displays additional data about the DTT Archive or Flat File selected in the Contents list, including (Figure 21):

- The machine on which the file was created.

- The number of experiments in the file.

- The number of span files associated with the file.

- Comments entered by the user when the file was created.

To close the Properties page:

- Click **OK**.

Figure 21
File Properties page

Transfer DTT Archive/Flat Files IN to GCOS, MAS 5.x, or No System: Review Data

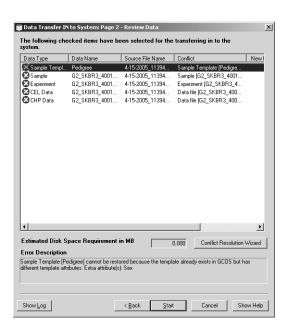This screen displays a list of the files selected for transfer with indications if there are problems (Figure 22).

Figure 22
Data Transfer IN to GCOS System: Review Data (DTT Archive/Flat Files)

To review the data for transfer:

1. Review the list of files for conflicts or other problems.

The Selected Item list displays the following information:

<table>
<tr><td>**Data Type**</td><td>• Project</td></tr>
<tr><td></td><td>• Sample</td></tr>
<tr><td></td><td>• Experiment</td></tr>
<tr><td></td><td>• DAT data</td></tr>
<tr><td></td><td>• CEL data</td></tr>
<tr><td></td><td>• CHP data</td></tr>
<tr><td></td><td>• GRD data</td></tr>
<tr><td></td><td>• JPG Data</td></tr>
</table>

with conflict indicators:

Data cannot be transferred due to conflict with template, sample, or userset or other problem.

Data can be transferred.

Transfer with warning: Data can be transferred but problems exist (may overwrite existing data, etc.).

Data Name	ID for the file.
New Data Name	Displays the new name selected for the template, sample, or userset during conflict resolution.
Conflict	Description of the conflict (also displayed in the Error Description box).

2. Click in an item row to see the full description of the problem with a file in the Error Description box.

For more information about the error messages, see *Error Messages and Troubleshooting Guide, on page 73*.

Click the Conflict Resolution Wizard button to resolve conflicts using the wizards, if necessary (see page 33).

3. Click **Next**.

The Transfer In Status window opens (see page 40).

Conflict Resolution Wizard

NOTE **The Conflict Resolution Wizard is disabled when transferring data into computers with MAS 5.x and No Affymetrix System installed.**

Use the Conflict Resolution Wizard to resolve problems with:

- Sample and Experiment Templates (see page 34)

  Templates are predefined forms used to register samples and define experiments in GCOS; a template has a set of attributes used to provide information about the sample or experiment. A template conflict arises when there are discrepancies in the number or name of attributes used in the GCOS template and the DTT Archive/ Flat File template.

  For more information about template conflicts, see *Template Issues, on page 73*.

- Samples (see page 36)

  Samples are created in GCOS, given attributes, and assigned to a project and sample type. A sample conflict arises when the same sample name exists in GCOS and in the DTT Archive/Flat file, but the samples are assigned to different project names, sample types, or other attributes.

  For more information about sample conflicts, see *Sample Issues, on page 76*.

- Usersets (see page 37)

  Usersets are a set of predefined parameter settings for the analysis algorithm. A userset conflict arises when there is discrepancy in the parameters used in the GCOS userset and the DTT Archive/ Flat File userset.

  For more information about userset conflicts, see *Userset Issues, on page 78*.

The Conflict Resolution Wizard allows you to resolve these conflicts by renaming the template, sample, or userset for the files being transferred into GCOS using DTT.

NOTE ⊜   **You may need to resolve conflicts in more than one category to transfer the data.**

Resolve Templates Tab

The Resolve Templates tab allows you to resolve conflicts in templates (Figure 23).

A typical template conflict involves discrepancies in the attributes for the template in the GCOS database as opposed to the template used for the data to be imported.
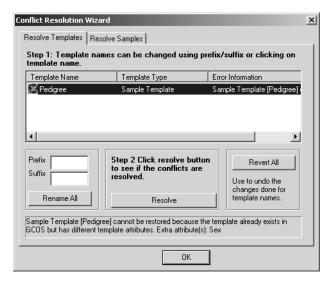

Figure 23
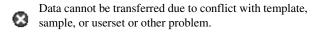Conflict Resolution Wizard, Resolve Templates tab

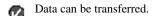**To resolve a conflict in the templates:**

   A. View the list in the Error Information box.

The Error information box displays a list of the Sample and Experiment templates with conflicts with the following information:

Template Name   with conflict indicators:

 Data cannot be transferred due to conflict with template, sample, or userset or other problem.

 Data can be transferred.

 Transfer with warning: Data can be transferred but problems exist (may overwrite existing data, etc.).

Template Type   Can be Experiment Template or Sample Template.

Error Information Additional information about the error (also displayed in the box above the OK button.

For more information about template conflicts, see *Template Issues, on page 73*.

Step 1: Template names can be changed using prefix/suffix or clicking on template name.

> **A.** Change the template name by:
>
> > ❑ Clicking on the template name in the Error Information box and editing the name.
> >
> > ❑ Using the Prefix and Suffix boxes:
> >
> > > **a.** Enter a prefix or suffix in the appropriate box.
> > >
> > > **b.** Click **Rename All**.
> > >
> > > All templates in the list are renamed.
> > >
> > > **c.** Click **Revert All** to undo the changes if necessary.
> > >
> > > Revert All undo the changes in the template names.

Step 2: Click Resolve button to see if the conflicts are resolved.

> **A.** Click the **Resolve** button and see if the error indicators in the list disappear.

    B. Click **OK** to accept the changes.

Resolve Samples Tab

The Resolve Samples tab allows you to resolve conflicts between samples in the database and in the files for transfer by renaming the sample name for the file to be transferred (Figure 24).

Figure 24
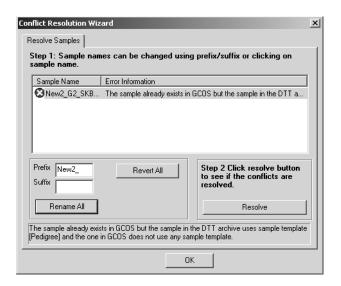Conflict Resolution Wizard, Resolve Samples tab

To resolve a conflict in the samples:

1. View the list in the Error Information box.

Error information displays a list of the samples with conflicts with the following information:

Sample Name   With conflict indicators:

         Data cannot be transferred due to conflict with template, sample, or userset or other problem.

 Data can be transferred.

 Transfer with warning: Data can be transferred but problems exist (may overwrite existing data, etc.).

Error Information   Additional information about the error (also displayed in the box above the OK button).

For more information about sample conflicts, see *Sample Issues, on page 76*.

Step 1: Change Sample names using prefix/suffix or clicking on template name.

A. Change the Sample name by:

  ❑ Clicking on the sample name in the Error Information box and editing the name.

  ❑ Using the Prefix and Suffix boxes:

    a. Enter a prefix or suffix in the appropriate box.

    b. Click **Rename All**.

      All samples in the list are renamed.

    c. Click **Revert All** to undo the changes if necessary.

      Revert All undo the changes in the template names.

Step 2: Click Resolve button to see if the conflicts are resolved.

A. Click the **Resolve** button and see if the error indicators in the list disappear.

B. Click **OK** to record the changes.

Resolve Usersets Tab

The Resolve Usersets tab allows you to resolve conflicts in usersets (Figure 25).

A typical userset conflict involves discrepancies in the parameters and values for the userset in the GCOS database as opposed to the userset used for the data to be imported.
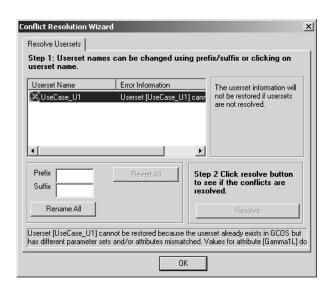
Figure 25
Conflict Resolution Wizard, Resolve Sample tab

To resolve a conflict in the userset:

1. View the list in the Error Information box.

The Error information box displays a list of the Usersets with conflicts with the following information:

Userset Name   With conflict indicators:

Data cannot be transferred due to conflict with template, sample, or userset or other problem.

Data can be transferred.

Transfer with warning: Data can be transferred but problems exist (may overwrite existing data, etc.).

Error Information   Additional information about the error (also displayed in the box above the OK button.

For more information about userset conflicts, see *Userset Issues, on page 78*.

Step 1: Userset names can be changed using prefix/suffix or clicking on template name.

  A. Change the Userset name by:

   ❑ Clicking on the Userset name in the Error Information box and editing the name.

   ❑ Using the Prefix and Suffix boxes:

     a. Enter a prefix or suffix in the appropriate box.

     b. Click **Rename All**.

      All usersets in the list are renamed.

     c. Click **Revert All** to undo the changes if necessary.

Step 2: Click Resolve button to see if the conflicts are resolved.

  A. Click the **Resolve** button and see if the error indicators in the list disappear.

  B. Click **OK** to record the changes.

Transfer DTT Archive/Flat File data In to GCOS, MAS 5.x, or No Affymetrix System: Transfer Data

The Transfer Data page displays the transfers in progress or completed during this session, with basic information about the transfer (Figure 26).
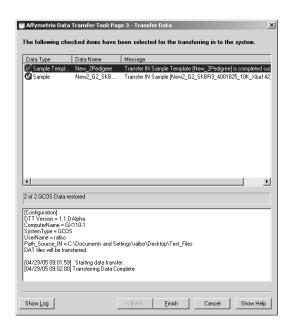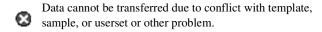

Figure 26
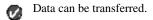Transfer Status page (DTT Archive or flat files into GCOS system)

The Selected Items box lists the data selected for transfer:

Data Type	• Project
	• Sample
	• Experiment
	• DAT data
	• CEL data
	• CHP data
	• GRD data
	• JPG data
	with conflict indicators:

Data cannot be transferred due to conflict with template, sample, or userset or other problem.

Data can be transferred.

Transfer with warning: Data can be transferred but problems exist (may overwrite existing data, etc.).

Data Name	ID for the file.
Message	Status of the transfer operation.

The lower box displays the contents of the transfer log for this session.

Transferring CAB or MAS 5.x Files IN to a GCOS System

You can use DTT to transfer GCOS data, Mining data, and MAS 5.x data in CAB or MAS 5.x format into a GCOS System.

NOTE **Before transferring data IN from a Mining (AADM) CAB file, you must create a new, empty mining (AADM) database in GCOS Manager. For more information, refer to the GCOS Manager documentation.**

To transfer data in CAB or MAS 5.x format:

1. Make initial setup for transfer (see below).

2. Select data for transfer (see page 45).

3. Track progress of transfer (see page 49).

NOTE **You must select the file type for transfer on the Welcome screen.**

Transfer CAB or MAS 5.x Files IN to GCOS System: Setup
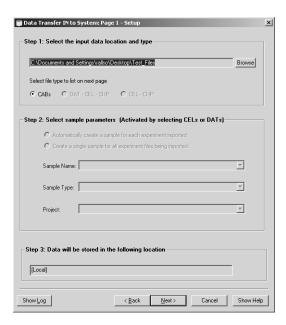
Figure 27
Transfer CAB files IN to GCOS system: Setup

To perform initial setup:
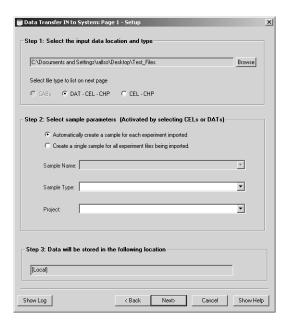
Figure 28
Transfer MAS 5.x Data IN to GCOS System: Setup

NOTE **You must select the file type (CAB or MAS 5.x) for transfer on the Welcome screen.**

Step 1: Select the input data location

   A. Click the **Browse** button and use the dialog box to select a directory where the CAB or Microarray Suite 5.x data files are located.

   B. Select the file type for input:

      You cannot select a file type on the Setup screen when importing CAB files.

The following options are used only to import MAS 5.x flat files (.cel, .chp, and .dat):

❑ DAT - CEL - CHP: Import image data (*.DAT).

When specifying the image data, the associated experiment information from the EXP file, the cell intensity data (CEL) and the probe analysis data (CHP) is automatically imported.

❑ CEL - CHP: Import cell intensity data (*.CEL) and probe analysis data (*.CHP).

When specifying the cell intensity data (CEL), the associated experiment information in the EXP file, the DAT file if it is present, and probe analysis data (CHP) is automatically imported with the cel intensity data. If the DAT file is missing, it will be marked as archived in the GCOS system.

Step 2: Select sample parameters

Not applicable when transferring CAB file data.

When importing MAS 5.x data:

A. Select options for creating samples on import:

❑ Automatically create a sample for each experiment imported.

❑ Create a single sample for all experiment files being imported.

B. Enter a Sample Name or select from the drop-down list.

Only active if placing all experiments under a single sample.

C. Enter a Sample Type or select from the drop-down list.

D. Enter a Project Name or select from the drop-down list.

Step 3: Data will be stored in the following location

A. Review the GCOS database location (Local or GCOS Server) and change if necessary.

To change the default destination, open GCOS and select the appropriate system (GCOS server or local system). The data transfer tool must be closed and reopened for settings to take effect.

NOTE ⊆   **You can only use the DTT to transfer MAS 5.x data into a GCOS Workstation. You cannot use the DTT to transfer MAS 5.x data into a GCOS Server. To transfer MAS 5.x data into a GCOS Server, use the import functionality in GCOS Manager application.**

B. Click Next.

The Select Data screen opens (see page 45).

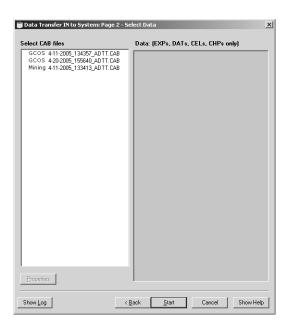**Transfer CAB or MAS 5.x Files IN to GCOS System: Select Data**

Figure 29
Select Data: GCOS CAB file

To select a CAB file:

1. Select the CAB file that contains the data to be transferred from the **Select CAB files** box.

To select adjacent items, press and hold the **Shift** key while you click the first and last item in the selection. To select non-adjacent items, press and hold the **Ctrl** key while you click the items.

NOTE ⊖ **You cannot select GCOS data and Mining data files for transfer in the same operation.**

This box lists the CAB files in the directory specified in **Step** 1 of the Setup page. GCOS and Mining CAB files are labeled.

If you select a CAB file with GCOS data, you can review the contents of the file in the **Data: (EXPs, DATs, CELs, CHPs only)** box.

CAB files with version 4.0.0 will not contain EXP files. A version 4.0.0 CAB file containing only experiments will not have its contents listed. To see the version of the CAB file see **Step** 2. The CAB version is listed in the CAB file properties.

Keep all span files together when transferring CAB files into GCOS.

2. Click **Properties** for more information about the selected CAB file.

The Properties page opens.

3. Click **Start** to begin the transfer.

Follow the directions in the notice boxes that appear.

- If you are transferring GCOS data, the Transfer Data window opens (see page 49).

- If you are transferring Mining data, the Select a database dialog box opens (Figure 30).

Figure 30
Select database dialog box

This dialog box displays the available empty Mining (AADM) databases.

1) Select a database to store the Mining (AADM) data from the list in the box.

2) Click **OK**.

A dialog box asks for the password to the mining database.

3) Enter the password and click **OK**.

You can track the progress of the transfer in the Transfer Data page (see page 49).

To select MAS 5.x files:
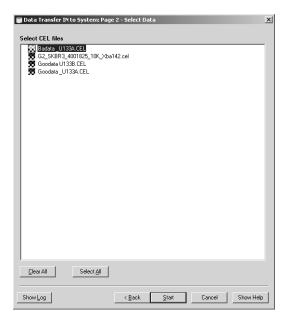
Figure 31
Select Data: MAS 5.x file

1. Select the MAS 5.x files that you wish to transfer from the **Select files** box.

To select adjacent items, press and hold the **Shift** key while you click the first and last item in the selection. To select non-adjacent items, press and hold the **Ctrl** key while you click the items.

To select all files in the box, click **Select All**.

To clear all selections, click **Clear All**.

2. Click **Start** to begin the transfer.

Follow the directions in the notice boxes that appear.

The Transfer Data window opens (see page 49).

Properties Page

Figure 32
Properties Page

The Properties page (Figure 32) displays additional data about a GCOS CAB file selected in the Select page, including:

• The machine on which the CAB file was created.

• The number of experiments in the GCOS CAB file.

• The number of span files associated with the CAB file. Span files are automatically created when the CAB file size exceeds 2 GB.

  Keep all span files together when transferring CAB files into GCOS.

• Comments entered by the user when the CAB file was created.

To close the Properties page:

• Click **OK**.

Affymetrix Data Transfer Tool: Transfer Data

The Transfer Data page displays the transfers in progress or completed during this session, with basic information about the transfer.

The progress bar (displayed only for transfers with CAB files) shows the progress of the transfer taking place.
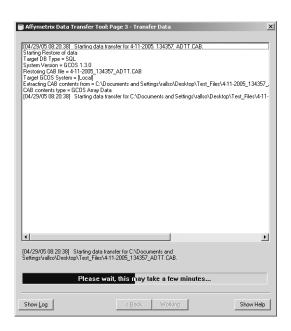
Figure 33
Transfer Data, transferring Mining Data from CAB file IN to GCOS

Transferring CAB Data IN To a Computer with MAS 5.x or No System

You can use DTT to:

- Transfer GCOS data in CAB format into a computer with MAS 5.x installed it.

- Unpack GCOS Process data in CAB format into a selected directory on a computer with No System installed on it.

To transfer CAB data into a computer with MAS 5.x or No System:

1. Select locations to and from which the data is to be transferred (see page 51).

2. Select the CAB files for transfer (see page 52).

3. Monitor progress of transfer (see page 49).

To learn more about transferring DTT Archive and Flat files into a computer with MAS 5.x or No System, see *Transferring DTT Archive/ Flat File Data IN to a Computer with GCOS, MAS 5.x, or No Affymetrix System, on page 21*.

NOTE **You must select the file type for transfer (CAB) on the Welcome screen.**

Transferring CAB Data IN To MAS 5.x or No System: Setup
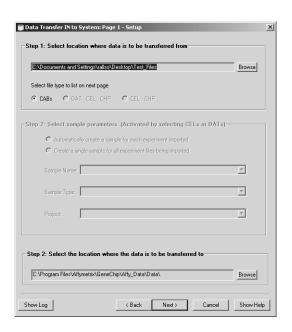
Figure 34
Transferring CAB Data IN to MAS 5.x or No System: Setup

NOTE **You must select the file type for transfer (CAB) on the Welcome screen.**

To set up to transfer data IN to a computer with MAS 5.x or No System:

Step 1: Select Location where data is to be transferred from

  A. Click the **Browse** button and use the dialog box to select a directory. The directory should contain the CAB file that contains GCOS data.

Step 2: Select the location where the data is to be transferred to

  A. Click the **Browse** button to change the destination folder.

  B. Click **Next**.

Transfer CAB Data IN to MAS 5.x or No System: Select Data
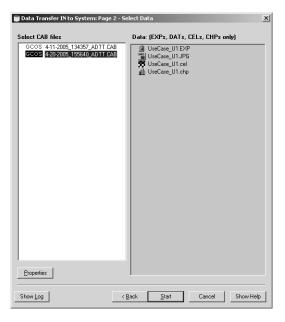
Figure 35
No System Transferring Data IN to System: Page 2 - Select Data
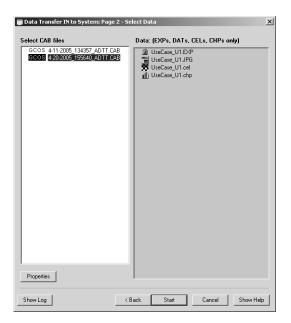
Figure 36
Transferring CAB Data IN to MAS System: Select Data

To select the data for transfer:

1. Select the CAB files which contains GCOS data to be transferred IN.

If you select a .cab file with GCOS data, you can review the contents of the file in the Contents box.

2. Click **Properties** for more information about the selected .cab file.

3. Click **Start** to begin the transfer.

Follow the directions in the notice boxes that appear.

Follow the progress of the transfer in the Data Transfer page (see page 49).

Figure 37
Transfer CAB Data IN to MAS 5.x System: Transfer Data

TRANSFERRING DATA OUT

You can use the DTT to transfer the following types of data out of GCOS:

- GCOS Process data
- Mining Data

You can transfer data out of GCOS in the following formats:

- DTT Archive (see page 55)
- Flat File (GCOS Process data only) (see page 55)
- CAB files (see page 65)

For more information about selecting file types for data transfer, see *DTT Options Dialog Box for GCOS System, on page 10*.

NOTE **You cannot use DTT to transfer data out of a computer unless GCOS is installed.**

NOTE **You must select the file type for transfer on the Welcome screen.**

Transferring Data OUT in DTT Archive and Flat Files

To transfer data OUT in DTT Archive and Flat Files:

1. Set up the transfer (see page 56).
2. Select the actual data to be transferred (see page 58).
3. Review the data that will be transferred to the CAB file (see page 62).
4. Observe the progress of the transfer on the Transfer Data page screen (see page 62).

NOTE **You must select the file type for transfer on the Welcome screen.**

Data Transfer Out of System: Setup (DTT Archive and Flat Files)
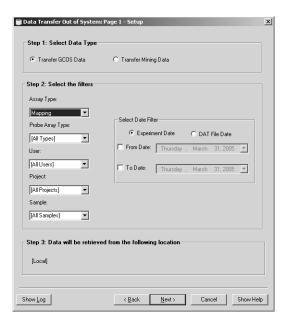
Figure 38
Data Transfer OUT of System: Setup (DTT Archive/Flat Files)

NOTE ⊜ **You must select the file type for transfer (DTT Archive or Flat File) on the Welcome screen.**

To set up a data transfer OUT:

Step 1: Select Data Type

> **A.** Select the data type for transfer:
>
> > ❑ Transfer GCOS Data: transfer data from GCOS Process Database.
> >
> > ❑ Transfer Mining Data: transfer data from Mining (AADM) database (option not available when using Flat File format).

NOTE 🖇 **Selecting Transfer Mining Data will export the entire contents of the selected Mining (AADM) database.**

Step 2: Select the filters

NOTE 🖇 **These controls are active only if you are transferring GCOS data.**

A. Select the filters for the data displayed in the Data Select screen:

Assay Type	Type of assay performed
Probe Array Type:	Particular probe array design used in the experiment.
User:	Person who created or imported the files.
Project	Category assigned in GCOS. Used to group a collection of samples.
Sample	Identifier for the sample, assigned in GCOS.
Select Date Filter	Use to filter using date ranges.
Experiment Date	Select to filter on date experiment was created.
DAT File Date	Select to filter on date DAT file associated with that experiment was created.
From Date	Start of date range.
To Date:	End of date range.

Only data that matches the parameters selected here is displayed in the Select Data screen (Figure 39).

Step 3: Data will be retrieved from the following location

A. Review the location of the data source and change if necessary.

To change the location of the data source (GCOS local or GCOS Server) open GCOS and change the option in the default settings for the application. The Data Transfer Tool must be closed and reopened for settings to take effect.

B. Click **Next**.

The Select Data page opens (see below).

Data Transfer Out of System: Select Data (DTT Archive and Flat Files)
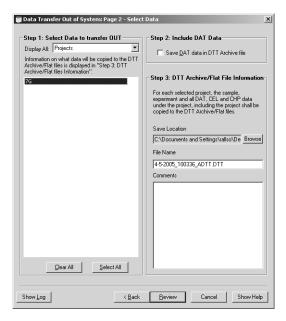

Figure 39
Data Transfer OUT of System: Select Data (GCOS data)

To transfer GCOS data:

Step 1: Select Data to transfer OUT

A. Select the type of data to display using the **Display All** drop-down box.

B. Select the data in the Select Data box.

❑ Click **Clear All** to clear previous selections.

❑ Click **Select All** to select all data shown on the screen.

The data copied to the archive file set is different for some of the data selections:

- Project: For each selected project, the sample, experiment, and all DAT, CEL, and CHP data, is copied to the archive file set with the Project data.

- Sample: For each selected sample, the parent project of the sample and all experiment(s), DAT, CEL, and CHP data under the sample, is copied to the archive file set with the Sample data.

- Experiment: For each selected experiment, the parent project and sample of the experiment and all DAT, CEL, and CHP data under the experiment, is copied to the archive file set with the Experiment data.

- DAT Data: For each selected DAT, the parent project, sample, and experiment of the DAT data is copied to the archive file set file with the DAT data. CEL and CHP data is not copied.

- CEL Data: For each selected CEL, the parent project, sample, experiment, and DAT dat of the CEL data, is copied to the archive file set with the CEL data. CHP data is not copied.

- CHP Data: For each selected CHP, the parent project, sample, experiment, DAT, and CEL data is copied to the archive file set with the CHP data.

Step 2: Include DAT Data

A. Choose whether to include or exclude the DAT data (option not available for transferring mining (AADM) data).

Step 3: DTT Archive/Flat File Information

A. Enter a location, file name, and comments for the archive file set that will be created.

NOTE   **This step is disabled when transferring data to Flat Files.**

      B. Click **Review** to review the data that will be transferred into the archive file set.

      C. Click **Start** to begin the transfer.

      Follow the directions in the notice boxes that appear.
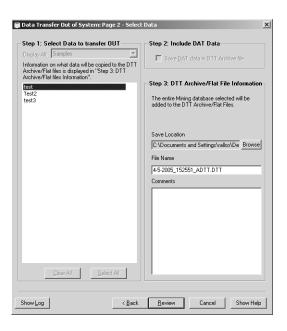
Figure 40
Data Transfer OUT of System: Select Data (Mining (AADM) data)

To transfer Mining Data:

NOTE   **Certain options are disabled in this screen when transferring Mining (AADM) data.**

Step 1: Select Data to Transfer OUT

The Display All drop-down list is disabled when working with Mining Data.

A. Select the Mining (AADM) database in the **Select Data** box.

Step 2: Include DAT Data

The *Step 2: Include DAT Data* option is not active when transferring Mining (AADM) data.

Step 3: DTT Archive/Flat File Information

A. Enter a location, file name, and comments for the DTT Archive file or the XML file for the flat files to be created.

B. Click **Review**.

The Enter Password DB opens (Figure 41).

Enter Password	✕
Database: test	
Password:	
OK	Cancel

Figure 41
Enter Password dialog box

C. Enter the password for the selected database and click **OK**.

The Data Transfer Out of System: Review Data window opens (see page 62).

Transferring Data Out of System: Review Data (DTT Archive and Flat File)

Figure 42
Data Transfer OUT of System: Review Data (DTT Archive/Flat File)

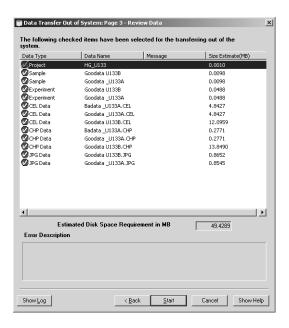The Review Data page allows you to review the data selected for the DTT Archive or Flat File.
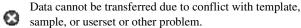
To review the data chosen for transfer:
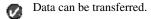
1. Review the Selected Items list:

Data Type or Mining Database	• Project
	• Sample
	• Experiment
	• DAT data
	• CEL data
	• CHP data
	• GRD data
	• JPG Data

with conflict indicators:

 Data cannot be transferred due to conflict with template, sample, or userset or other problem.

 Data can be transferred.

 Transfer with warning: Data can be transferred but problems exist (may overwrite existing data, etc.).

Data Name	Data type (see list above).
Message	Error or warning message
Size Estimate (MB)	Estimate of the necessary disc space in megabytes.
Error Description	Details of the detected problem, if any.

2. Click **Next** to continue the transfer

The Transfer Data page opens.

Affymetrix Data Transfer Tool: Transfer Data (DTT Archive and Flat Files)

The Transfer Data page displays the transfers in progress or completed during this session, with basic information about the transfer.
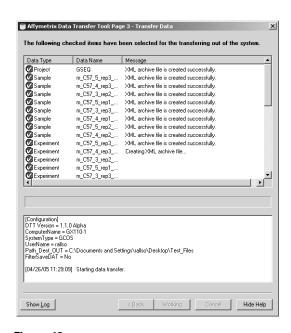
Figure 43
Data Transfer OUT of System: Transfer Data (DTT Archive/Flat File)

The Selected Items box lists the data selected for transfer:

Data Type	• Project
	• Sample
	• Experiment
	• DAT data
	• CEL data
	• CHP data
	• GRD data
	• JPG Data

with conflict indicators:

Data cannot be transferred due to conflict with template, sample, or userset or other problem.

Data can be transferred.

Transfer with warning: Data can be transferred but problems exist (may overwrite existing data, etc.).

Data Name   ID for the file.

Message   Status of the transfer operation.

The lower box displays the contents of the transfer log for this session.

Transferring Data OUT in CAB Files

To transfer data OUT of GCOS to a CAB file:

1. Set up the transfer (see page 66).

2. Select the actual data to be transferred (see page 68).

3. Review the data that will be transferred to the CAB file (see page 71).

4. Observe the progress of the transfer on the Transfer Data page screen (see page 49).

NOTE **You must select the file type for transfer on the Welcome screen.**

Data Transfer Out of System: Setup (CAB)

Figure 44
Data Transfer OUT of System: Setup (CAB)

NOTE   **You must select the file type for transfer on the Welcome screen.**
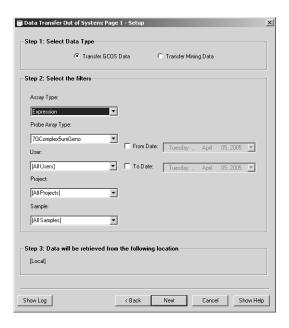
To set up a data transfer OUT into CAB format:

Step 1: Select Data type

    A. Select the data type for transfer:

        ❑ Transfer GCOS Data: transfer data from GCOS Process
           Database.

        ❑ Transfer Mining Data: transfer data from Mining (AADM)
           database.

NOTE   **Selecting Transfer Mining Data will export the entire contents of the selected Mining (AADM) database.**

Step 2: Select the Filters

A. Select the filters for data displayed in the next screen.

NOTE   **These controls are active only if you are transferring GCOS data.**

You can filter using the following parameters:

Assay Type	Type of assay performed.
Probe Array Type	Particular probe array design used in the experiment.
User	Person who created or imported the files.
Project	Category assigned in GCOS. Used to group a collection of samples.
Sample	Identifier for the sample, assigned in GCOS.
Date	Data created during a range of dates:
From	Start date.
To	End date.

Step 3: Data will be retrieved from the following location

A. Review the data location.

To change the location of the data source (GCOS local or GCOS Server) open GCOS and change the option in the default settings for the application. The Data Transfer Tool must be closed and reopened for settings to take effect.

B. Click **Next**.

The Select Data page opens.

Data Transfer out of System: Select Data (CAB)
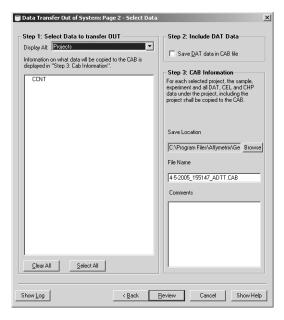
Figure 45
Data Transfer OUT of System: Select Data (CAB)

To select GCOS Data for transfer:

Step 1: Select Data to transfer OUT

    A. Select the type of data to display using the **Display All** drop-down box.

    B. Select the data in the Select Data box.

        ❑ Click **Clear All** to clear previous selections.

        ❑ Click **Select All** to select all data shown on the screen.

    The data copied to the CAB file is different for some of the data selections:

- ❑ Project: For each selected project, the sample, experiment, and all DAT, CEL, and CHP data, is copied to the CAB file with the Project data.

- ❑ Sample: For each selected sample, the parent project of the sample and all experiment(s), DAT, CEL, and CHP data under the sample, is copied to the CAB file with the Sample data.

- ❑ Experiment: For each selected experiment, the parent project and sample of the experiment and all DAT, CEL, and CHP data under the experiment, is copied to the CAB file with the Experiment data.

- ❑ DAT Data: For each selected DAT, the parent project, sample, and experiment of the DAT data is copied to the CAB file with the DAT data. CEL and CHP data is not copied.

- ❑ CEL Data: For each selected CEL, the parent project, sample, experiment, and DAT dat of the CEL data, is copied to the CAB file with the CEL data. CHP data is not copied.

- ❑ CHP Data: For each selected CHP, the parent project, sample, experiment, DAT, and CEL data is copied to the CAB file with the CHP data.

Step 2: Include DAT Data

A. Choose whether to include or exclude the DAT data (option not available for transferring mining (AADM) data).

Step 3: CAB Information

A. Enter a location, file name, and comments for the CAB file that will be created.

B. Click **Review** to review the data that will be transferred into the CAB file.

To select Mining Data for transfer:

NOTE ⊝   **Selecting Transfer Mining Data will export the entire contents of the selected Mining (AADM) database.**

NOTE ⊝   **Certain options are disabled in this screen when transferring Mining (AADM) data.**

Step 1: Select Data to Transfer OUT

The Display All dropdown list is disabled when working with Mining Data.

A. Select the Mining (AADM) database in the **Select Data** box.

Step 2: Include DAT Data

NOTE ⊝   **The *Step 2: Include DAT Data* option is not active when transferring Mining (AADM) data.**

Step 3: CAB Information

A. Enter a location, file name, and comments for the CAB file that will be created in **Step 3**.

B. Click **Review**
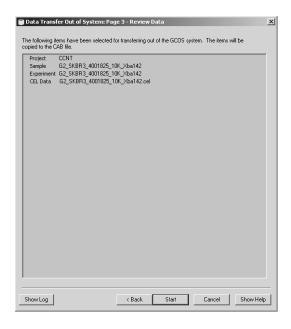
The Enter Password DB opens (Figure 46).

Figure 46
Enter Password dialog box

C. Enter the password for the selected database and click **OK**.

The Data Transfer Out of System: Review Data window opens (see below).

Transferring Data Out of System: Review Data (CAB)

Figure 47
Data Transfer OUT of System: Review Data (CAB)

The Review Data page allows you to review the data selected for the CAB file.

When transferring GCOS data, the page lists any of the following data types that have been selected:

• Project

• Sample

• Experiment

- DAT data
- CEL data
- CHP data
- GRD data
- JPG data

When transferring mining data, the page lists the selected mining (AADM) databases.

- Click **Start** to begin the transfer and go to the Transfer Data page (see page 49).

Error Messages and Troubleshooting Guide

Error messages appear in DTT when there is a conflict of some sort between the data being imported and the existing contents of the GCOS databases. Many of these conflicts can be resolved using the Conflict Resolution Wizard (see *Conflict Resolution Wizard, on page 33*). Other problems may require other action to resolve.

Error messages describe:

- *Template Issues (see below)*
- *Sample Issues (see page 76)*
- *Userset Issues (see page 78)*
- *Miscellaneous Issues (see page 79)*

TEMPLATE ISSUES

Templates are predefined forms used to register samples and define experiments in GCOS; a template has a set of attributes used to provide information about the sample or experiment. A template conflict arises when there are discrepancies in the number or name of attributes used in the template in GCOS and the template in the DTT Archive/Flat File.

For more information about resolving template conflicts, see *Resolve Templates Tab, on page 34*.

Table 1
Template issues

Error Message	Why the Transfer IN is flagged as an error	How to resolve the error
Sample Template [<Name of sample template>] cannot be restored because the template already exists in GCOS but has different template attributes. Extra attribute(s): <Name of attribute>	The sample template to be transferred IN with the sample already exists in GCOS. The sample template attributes are different. The extra attribute in the sample to be transferred IN is called <Name of attribute> This message will also apply to experiment templates.	Use the Conflict Resolution Wizard to rename the template to be transferred in. As an alternative, add the attribute that is displayed in the error message into the template already in GCOS.
Sample Template [<Name of template>] cannot be restored because the template already exists in GCOS but has different template attributes. Data type mismatch for attribute(s): <Name of attribute>	The sample to be transferred In and the sample in GCOS use a template with identical names and attributes. However, the data type (string, integer, float, integer etc.) for the listed attribute is different when comparing the two templates. This message will also apply to experiment templates.	Use the Conflict Resolution Wizard to rename the template to be transferred in.
Sample Template [<Name of template>] cannot be restored because the template already exists in GCOS but has different template attributes. Controlled values mismatch for attribute(s): <Name of attribute>	The sample to be transferred In and the sample in GCOS use a template with identical names and attributes. However, the listed attribute is a controlled attribute that uses different control values when compared with the controlled values used by the template attribute in GCOS. This message will also apply to experiment templates.	Use the Conflict Resolution Wizard to rename the template to be transferred in.

Table 1

Template issues

Error Message	Why the Transfer IN is flagged as an error	How to resolve the error
Warning: Sample Template [<Name of template>] will not be restored because the template already exists in GCOS but the template attributes are in different order. Restored sample will use the existing template in the GCOS.	This is only a warning. The attribute order used by the incoming template is different than the attribute order of the template already in GCOS. This message will also apply to experiment templates.	No further action is required.
Warning: Sample Template [<Name of sample template>] already exists in GCOS but the template in the DTT Archive contains more template attributes. The extra attributes will be inserted into the existing template in GCOS. Extra attribute(s): <Name of attribute>.	This is a warning or an error based on the user rights. It indicates that the template to be transferred in with the data already exists in GCOS. The template in GCOS has fewer attributes than the one being transferred IN. The GCOS template will be updated with the new attributes if the user has rights to update the template in the database. On a GCOS Server, this may show up as an error if the user does not have rights to the update the template. This message will also apply to experiment templates.	When this is displayed as a warning, no further action is required. This message will shows up as an error when transferring data IN to a GCOS Server and if the user does not have permission to maintain templates. To resolve this, use the conflict wizard to rename the template and bring it in as a new template. Alternately, speak with your GCOS Server administrator to get the appropriate permission to maintain templates on the server. This can be done by the administrator using the roles tab in GCOS Manager.
Failed to restore experiment [<Name of experiment>] because there are errors in restoring the associated experiment template [<Name of experiment template>].	This error is displayed when the software fails to transfer IN the experiment template. All experiments using this template and all children of the experiment(s) will fail to transfer IN.	Use the Conflict Resolution Wizard to rename the template to be transferred in.

SAMPLE ISSUES

Samples are created in GCOS, given attributes, and assigned to a project and sample type. A sample conflict arises when the same sample name exists in GCOS and in the DTT Archive/Flat file, but the samples are assigned to different project names, sample types, or other attributes.

For more information about resolving sample conflicts, see *Resolve Samples Tab, on page 36*.

Table 2
Sample issues

Error Message	Why the Transfer IN is flagged as an error	How to resolve the error
The sample already exists in GCOS but has different sample types. The sample type in the DTT Archive is [<*sample type* value of Sample to transfer IN>] but the one in GCOS is [<*sample type* value of sample in GCOS>].	The "*sample type*" field for sample associated with the experiment to be transferred IN has a different value than the one used by the sample with the same name in GCOS.	Use the Conflict Resolution Wizard to rename the sample used by the experiment to be transferred in. As an alternative, open up the experiment in GCOS UI and change the sample type value to be the same as that used by the sample to be transferred IN.
The sample already exists in GCOS but has different project names. The project name in the DTT Archive is [<*Project* value of sample to transfer IN>] but the one in GCOS is [<*Project* value of sample in GCOS>].	The "*Project*" field for sample associated with the experiment to be transferred IN has a different value than the one used by the sample with the same name in GCOS.	Use the Conflict Resolution Wizard to rename the sample used by the experiment to be transferred IN. As an alternative, open up the experiment in GCOS UI and change the "*Project*" attribute value to be the same as that used by the Sample to be transferred IN.

Table 2
Sample issues

Error Message	Why the Transfer IN is flagged as an error	How to resolve the error
The sample already exists in GCOS but has different project names and sample types. Project name is [<*Project* value of sample to transfer IN>] and sample type is [<*sample type* value of Sample to transfer IN>] for the sample in the DTT Archive but [<*Project* value of sample in GCOS>] and [<*sample type* value of sample in GCOS>] in GCOS respectively.	The "*sample type*" and "Project" value for the sample associated with the experiment to be transferred IN has a different value than the one used by the sample with the same name in GCOS.	Use the Conflict Resolution Wizard to rename the sample used by the experiment to be transferred in. As an alternative, open up the experiment in GCOS UI and change the "sample type" and "*Project*" value to be the same as that used by the sample to be transferred IN
The sample already exists in GCOS but has different sample attribute value. The attribute that have different values is <*name of attribute*>.	A sample using the same name as the one to be transferred IN already exists in GCOS and uses the same template as the sample to be transferred IN. The sample template attribute value in the sample to be transferred IN does not match up with the sample template attribute value already in GCOS.	Use the Conflict Resolution Wizard to rename the sample used by the experiment to be transferred in.
The sample already exists in GCOS but the two sample use templates with different names.	A sample using the same name as the one to be transferred IN already exists in GCOS. The two samples use a different sample template.	Use the Conflict Resolution Wizard to rename the sample used by the experiment to be transferred in.
The sample already exists in GCOS but has different number of sample attributes. The sample in the DTT Archive has 3 attributes but the one in GCOS has 4.	A sample using the same name as the one to be transferred IN already exists in GCOS. The two samples use templates with identical names. However the number of template attributes used by the sample in GCOS is different than the sample in the DTT Archive.	Use the Conflict Resolution Wizard to rename the sample used by the experiment to be transferred in.

USERSET ISSUES

Usersets are a set of predefined parameter settings for the analysis algorithm. A userset conflict arises when there is discrepancy in the number and values of parameters used in the GCOS userset and the userset in the DTT Archive/Flat File.

For more information about resolving userset conflicts, see *Resolve Usersets Tab, on page 37*.

Table 3
Userset Issues

Error Message	Why the Transfer IN is flagged as an error	How to resolve the error
Userset [<Name of the userset>] cannot be transferred IN because the user does not have the appropriate privilege to create/update usersets. Please use the roles tab in GCOS Manager to get the necessary privilege.	This is an error that will be displayed when transferring IN data onto a GCOS Server and the user does not have permission to transfer in Usersets.	This message will shows up as an error when transferring data IN to a GCOS Server and if the user does not have permission to maintain userset. To resolve this, use the conflict wizard to rename the userset and bring it in as a new userset. As an alternative, speak with your GCOS Server administrator to get the appropriate permission to maintain usersets on the server. This can be done by the administrator using the roles tab in GCOS Manager.
Userset [<Name of userset>] cannot be restored because the userset already exists in GCOS but has different parameter sets and/or attributes mismatched. <Name of parameter>	This is an error that will be displayed when the user tries to transfer in a userset that already exists in the GCOS database. The userset parameters for the array do not match.	Use the Conflict Resolution Wizard to rename the userset to be transferred in.

Table 3
Userset Issues

Error Message	Why the Transfer IN is flagged as an error	How to resolve the error
Warning: Userset [<Name of userset>] already exists in GCOS but the userset in the DTT Archive contains more parameter sets. The extra parameter set will be inserted into the existing userset in GCOS. <Name of parameterset>	This is a warning or an error based on create/update permissions. The message will be displayed when the user tries to transfer in a userset that contains more parametersets than the userset in GCOS. The extra userset will be inserted into GCOS if the user has appropriate permissions.	When this is displayed as a warning, no further action is required. This message will shows up as an error when transferring data IN to a GCOS Server and if the user does not have permission to maintain usersets. Speak with your GCOS Server administrator to get the appropriate permission to create/maintain usersets on the server. This can be done by the administrator using the roles tab in GCOS Manager.
This userset uses multiple probe arrays one of which is <Name of userset>. Probe array type <[Name of userset not installed in GCOS]> is not installed on the system. Please reinstall this probe array on your system and retry the transfer IN.	This is an error when the user is trying to transfer IN an experiment that uses a userset and the incoming Userset has multiple probe arrays, one of which is not installed on the system. The software will not transfer IN the experiment if this probe array has not been installed on the system.	Resolve by installing the library for the probe array type the name of which is given in the error message.

MISCELLANEOUS ISSUES

The following error messages appear for miscellaneous issues that can cause problems transferring data IN to GCOS.

Table 4
Miscellaneous Issues

Error Message	Why the Transfer IN is flagged as an error	How to resolve the error
Probe array type [<name of probe array>] is not installed on the system. Experiment [<Name of experiment>] cannot be restored.	This message is displayed when trying to transfer IN an experiment for which the probe array does not exist on the local system.	Install the library file for the probe array specified in the error message.
Experiment already exists in GCOS database	This is an error message displayed when an experiment name in GCOS conflicts with an experiment to be transferred IN.	GCOS can have only 1 experiment with the same name in the database. Use GCOS Manager to delete the experiment in GCOS to transfer IN the experiment from the archive.
Failed to restore experiment [<Name of experiment>] because there are errors in restoring the associated experiment template [<Name of experiment template>].	This error is displayed when the software fails to transfer IN the experiment template. All experiments using this template and all children of the experiment(s) will fail to transfer IN.	Use the Conflict Resolution Wizard to rename the template to be transferred in.
Hybridization protocol script [<Name of script>] is not installed on the system. The protocol parameter will not be restored.	This is a warning indicating that the parameters from the wash and stain script will not be inserted into the GCOS database because the fluidics script has not been installed using the script installer.	The wash and stain scripts can be installed using the appropriate fluidics script installer. Once the script is installed, the parameters will be restored when the experiment is transferred IN.

Table 4
Miscellaneous Issues

Error Message	Why the Transfer IN is flagged as an error	How to resolve the error
Failed to transfer data file [<Name of file>] which already exists in the GCOS database.	This message is displayed if the data file is associated with an experiment in the database. The experiment name in GCOS database is different than the experiment name in the data to be transferred IN. However, the children of the experiment to be transferred IN, clash with datafiles with the same name in the GCOS database.	It will not be possible to transfer IN the data files without first deleting the data files in GCOS. Use GCOS Manager to delete the files in the database if they are no longer required.
Data file [<Name of file>] cannot be transferred because the associated parent data file [<Name of parent>] cannot be transferred.	This message will be displayed for all children of a GCOS object that will has an error. E.g. If an experiment has an error icon next to it, all children of the experiment (DAT, CEL and CHP) will have this error message. If a CHP file uses a userset and the userset cannot be transferred IN, the CHP file will fail to transfer IN.	Use the Conflict Resolution Wizard to resolve templates, samples and usersets. If the parent is an experiment, the error is displayed if the experiment already exists in the database.
Warning: Data file [<Name of data file>] already exists in GCOS data folder. The data file will be overwritten.	This is a warning. This indicates that there is a file in the GCOS data directory that will be overwritten. This applies to JPG and GRD files. It will also apply the DAT, CEL and CHP files when the files are not associated with any experiment in the GCOS database.	Move the files out of the data directory if they need to be preserved.

Table 4
Miscellaneous Issues

Error Message	Why the Transfer IN is flagged as an error	How to resolve the error
Warning: Experiment file [<Name of EXP file>] already exists in the <Name of directory>. The experiment file will be overwritten.	This message will show up on MAS 5.x systems when the experiment to be transferred IN already exists.	Move the experiment file out of the data directory if they need to be preserved.

Parsing Failures and Character Issues

The DTT Archive and Flat File formats use XML files for the experiment information that DTT uses to import the data. When the XML file contains characters that can't be parsed by the XML parser, DTT gives the following error message (Figure 48):

Figure 48
XML Parsing Error message

When the error appears, you need to create a DTTConfig.CSV mapping file that provides the correct ASCII decimal code for the character, so DTT can use the mapping file to parse the XML file.

To create the DTTConfig.CSV mapping file:

1. Determine which character is causing the problem in the XML file.

The most likely source of the invalid character is the experiment name, sample name, or one of the sample/experiment template attribute values. If you have used a non-US English symbol, then the non-US english symbol would need to be changed to an ASCII representation.

NOTE ⊜   **GCOS has only been validated on a U.S.English environment.**

  2. Determine the ASCII decimal character code for that character. You can use the Symbol dialog box to find the ASCII decimal character code:

   A. Open a document in Microsoft® Word.

   B. Select **Insert** → **Symbol** from the Word menu bar.
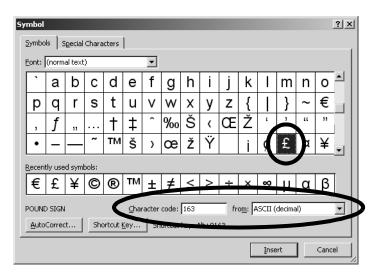   The Symbol dialog box opens (Figure 49).

Figure 49
Symbol dialog box in Microsoft Word

   C. Select Normal Text for the font

   D. Select the symbol causing the problem in the list.

   E. Select ASCII (decimal) in the From drop-down box.

   F. Note the ASCII character code

  3. Create the DTTConfig.CSV character mapping file.

The DTTConfig.CSV file (Figure 50) is a comma separated value file.

Figure 50
.CSV file

It contains a line for each character that needs the special mapping to ASCII code in the format: `symbol, ASCII decimal code`.

You can use any text-editing program, such as Notepad, to create the file.

4. Place the .CSV file in the same directory as the DTT executable.

DTT will use the character mappings to parse the XML files.

NOTE ⊑ **DTT 1.1 can parse the following characters without a .CSV file: &, <, >,°, ®, £, ¥**

GCOS Data Compatibility Table

GCOS software is backwards compatible. This means data generated with previous versions of GCOS or MAS 5.x software can be read with the latest version of GCOS. Data in CAB files is converted only when transferring data generated on GCOS systems into a system with Microarray Suite 5.x or when transferring data generated on GCOS 1.2 or later versions into GCOS 1.0/1.1/1.1.1.

The data compatibility table gives additional information about the types of data transfers that are possible.

NOTE ⊜   **Any experiments using probe array types that require sub-gridding on DAT images will not be restored to GCOS versions 1.2 and lower. This includes Microarray Suite Software.**

Table 5
Data compatibility table

Target system	Data format in CAB file	Comments
Microarray Suite 5.0	The CEL and CHP data formats were updated in GCOS 1.x. CEL and CHP Data generated on GCOS 1.x systems will be converted to the MAS 5.0 format. The software will copy the DAT data if they were transferred to the CAB file during the CAB creation process.	Data generated on a GeneArray® 2500 scanner can be transferred to a MAS 5.0 system. Data acquired from all other scanners will be rejected. Only expression and universal assay data can be transferred into a system with MAS 5.0. CEL data for the associated CHP data is required to convert CHP data from a GCOS system to a MAS 5.x system. The Data Transfer tool is not supported on Microsoft® Windows® NT SP6a systems.
Microarray Suite 5.1	The CEL and CHP data formats were updated in GCOS 1.x. CEL and CHP Data generated on GCOS systems will be converted to appropriate formats. The software will copy the DAT data if they were transferred to the CAB file during the CAB creation process.	Data generated using the GCS 3000 High Resolution scanner cannot be transferred to a MAS 5.1 system. CEL data for the associated CHP data is required to convert CHP data from a GCOS system to a MAS 5.x system. Only expression and universal assay data can be transferred into a system with MAS 5.1.

Table 5
Data compatibility table

Target system	Data format in CAB file	Comments
GCOS 1.0/1.1/1.1.1	The CHP data format was updated going from GCOS 1.0/1.1/1.1.1 to GCOS 1.2 or later. CHP data generated on GCOS 1.2 or later will be converted to the appropriate GCOS 1.0/1.1/1.1.1 format. GCOS software is backwards compatible. All data which was generated on a Microarray Suite 5.x system will be copied without any conversion.	Expression, Mapping, Universal and Resequencing data can be transferred between the two GCOS systems. CHP data generated using the new Dynamic Model Mapping algorithm cannot be transferred to a GCOS 1.0/1.1/1.1.1 system because the software does not support the new algorithm. CEL data for the associated CHP data is required to transfer CHP data from a GCOS 1.2 or later system to a GCOS 1.0 or MAS 5.x system. Data from GCOS 1.3 and higher systems that use sub-grids cannot be transferred to a GCOS 1.0/1.1/1.1.1/1.2 system
GCOS 1.3	New algorithms to support data that require sub-grids were introduced in GCOS 1.3. In addition when a DAT file is created, a JPG representation of the same file is created automatically. These files cannot be transferred to a GCOS system with version less than 1.3.	
GCOS 1.4	The CHP data format for CustomSeq arrays was updated going into GCOS 1.4. This data will lose new fields if transferred back to older systems that do not support the resequencing format.	
System without any Affymetrix Software.	When transferring CAB data into systems without any Affymetrix software, all data is converted into GCOS 1.1.1 format.	Before extracting CHP data from the CAB files, it is necessary to copy the library (*CDF) files into the target directory.