Recorder 6

Guidance on transferring Recorder 2002 data to Recorder 6

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Introduction

This document is based on Guidance on transferring Recorder 2002 data using Recorder 6104 V3SarahShaw.doc, a document written by Sarah Shaw for Recorder 6 v6.10.4.120 and made available via her post on the NBN Forum 24/09/2007. It was updated by Sally Rankin for v6.13.2 under contract to JNCC in March 2009. It is aimed at all skill levels.

It provides guidance on how to transfer data from Recorder 2002 to Recorder 6 version 6.13.2.

When Recorder 6 is installed, it is installed as a completely separate system from Recorder 2002, with a separate SQL Server database, separate Recorder folder(s) and separate registry entries. Recorder 2002 users then need to transfer their data from the Recorder 2002 Microsoft Access 97 database to the Recorder 6 SQL Server database, using the facility on Recorder 6 installation CDs.

In summary the procedure is:

- Install Recorder 6 using the Site ID and Verification key for your Recorder 2002 system
- Compact your Recorder 2002 database. If this fails, clear the corruptions before proceeding
- Copy your data from Recorder 2002 to Recorder 6 using the facility on the installation CD. If errors are detected details will be stored in UpgradeErrors.mdb in the Database folder in your Recorder 2002 system
- Clear any errors related to user added data in UpgradeErrors.mdb in Recorder 2002 and copy your data from Recorder 2002 to Recorder 6 again. Repeat this process until no errors are reported in user added data

You can then test Recorder 6 to ensure you are happy to go live with it. The two systems can be run side by side for as long as necessary but Recorder 2002 must remain the ONLY live system until you are ready to go live with Recorder 6. The transfer process replaces the existing Recorder 6 database with an ‘empty’ one each time the transfer is run so any additions, edits or deletions done in Recorder 6 will be lost when data is transferred from Recorder 2002 again. Hence Recorder 6 should not be used as a live system until the transfer from Recorder 2002 has been done for the last time.

Transferring data from Recorder 2002 to Recorder 6 is much more straightforward than Recorder 3 to Recorder 6 data transfers but you must clear as many errors as possible in UpgradeErrors.mdb to ensure a satisfactory transfer. You can copy your data from Recorder 2002 to Recorder 6 as many times as you like/need to, during which time you can continue to use Recorder 2002 for live running and Recorder 6 for testing purposes. When you are happy to go live with it, uninstall Recorder 2002 and start using Recorder 6 as your live system.

You are advised to do the transfer while your Recorder 6 system is at the version on the installation CD that you will be using for the transfer, i.e. before running any dictionary or software upgrades. This is because the process loads a new ‘empty’ database from the CD prior to transferring the data so if you ran an upgrade then transferred your data you
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would be using one version of the software with an earlier version of the database. This is not good practice. In fact, if the upgrade contains changes to the database the upgraded software may not run with an earlier version of the database. If you did run an upgrade prior to the transfer you would need to run it again after the transfer to upgrade the database to the same version as the software, as any changes to the database done by the upgrade would have been lost during the data transfer.

Please note the warning in the installation guides about only being able to transfer data from Recorder 2002 version 2.3.1 or later. Help – About Recorder 2002 will tell you the version of your copy of the system.

The Recorder 6 database is large before you add any data because the Recorder 2002 databases nbndata.mdb, nbndict.mdb, Index_Taxon_Group, Name & Synonym.mdb are all in the same file. Hence it is nearly 1.17 GB after installing v6.13.2.176 and before the user adds any data. Also, dictionary upgrades increase the size of the database and reduce the space available for user added data in the free run-time versions of SQL Server.

The current Recorder 6 installation CDs enable users to install MSDE (Microsoft SQL Server 2000 Desktop Engine), the free run-time version of SQL Server 2000, to run the system if they don’t already have SQL Server. The next version will enable them to install SQL Server 2005 Express, the free run-time version of SQL Server 2005, from the CDs.

Users need to be aware that the maximum size of a MSDE database is 2 GB so they won’t be able to use MSDE for running Recorder 6 if their data takes them over this limit. They may, however, be able to use SQL Server 2005 Express as the maximum size of a database in that is 4 GB. In SQL Server 2000 and 2005 the size of the database is more or less unlimited – the size is only likely to be constrained by the hardware available. After transferring a database containing nearly 400,000 species observations to v6.10.4.120 the Recorder 6 database was 1.56 GB so it should be possible to run it with MSDE for sometime, if necessary. A Recorder 2002 to Recorder 6 v6.10.4.120 (MSDE) data transfer for a system containing about 700,000 species observations failed because the data wouldn’t fit into an MSDE database.

Time permitting, most users will be able to transfer their own data using the information in this document although they will need some Microsoft Access expertise to check the transfer and resolve any problems that may occur – a number of the more common problems are listed in Section 6. If you would like assistance with your transfer please contact the supplier of your copy of Recorder, or any of the Recorder suppliers listed on the Recorder Software website www.recordersoftware.org for a quote.

The screen shots in this document were prepared when the current version was 6.10.4.120. They may differ in later versions
2 Preparation

Install Recorder 6 using the Site ID and Verification key for your Recorder 2002 system although the installation process will pick up your Site ID from your Recorder 2002 system if it is installed on the same PC. Network and Standalone Installation Guides are in the Documentation folder on both versions of the installation CDs. To minimise the risk of encountering installation problems please follow the instructions in these guides carefully.

Backup your Recorder 2002 system.

Compact your Recorder 2002 database before proceeding with the transfer to Recorder 6. To do this:

- Login to Recorder 2002 as a system manager. The Welcome screen will tell you whether or not the access level of your username is System Manager. Help – Summary Info will bring this up at any time. If the Default User is unchanged it will have system manager level access
- Select Tools – Database Tools – Compact and allow time for the process to complete. You will be warned that it may take a long time but it will probably only take a few minutes unless your PC is slow or you are compacting a very large database

If the compact completes without reporting any errors it is safe to transfer your data. If it doesn't, there is probably a minor corruption in a memo field that is causing the compact to fail. This is a common problem in Microsoft Access databases. If the problem isn't cleared, the transfer will simply stop transferring data in the table concerned when it hits the corrupt record. This can lead to thousands of other items not transferring. Section 6 below contains details of how to clear corruptions, along with information about a variety of other problems you may encounter.

If Recorder 2002 is not installed on the same machine as your Recorder 6 system you will need to copy your Recorder 2002 files and folders to the Recorder 6 machine, the server machine if you have a network installation of Recorder 6. Recorder 2002 doesn’t need to be installed on this machine but the transfer process will need access to many of its files. The minimum requirement is to have the Database folder containing the Recorder 2002 databases nbndata.mdb, nbndict.mdb, Index_Taxon_Group, Name & Synonym.mdb. If you want things like rucksacks and recording cards transferred you will also need the folders that contain them on the Recorder 6 machine. In the case of standalone Recorder 2002 installations, it will probably be easiest to copy the whole Recorder 2002 folder as this will contain everything required unless you have changed the location of any components. In the case of network Recorder 2002 installations, you will need to copy both the Recorder 2002 server folder held on the server machine and the Recorder 2002 folder held on a workstation machine.

If you have the necessary Access expertise, you may like to check your Recorder 2002 database for some of the referential integrity problems in Section 6.4 and the sections that follow. This could save you a lot of work when you come to analyse the contents of UpgradeErrors.mdb.
Note that if machines with different Computer Names (see Properties on My Computer in Windows XP) are used for Recorder 2002 and Recorder 6 the mapping files won’t transfer satisfactorily because the Computer Names are stored in the Computer_ID field in the Map_sheet table in the Recorder database in order to control what background layers are used on the different workstations.

Before beginning the transfer process please ensure that you have all of the necessary permissions required – see the ‘Permissions and Instructions’ section of the ‘Network Installation Guide v5.1’ or the ‘Standalone Installation Guide v3.1’ provided in the Documentation folder on both installation CDs.

Please note that to transfer data from an installation of Recorder 2002 to a SQL Server 2000/MSDE network installation of Recorder 6 version 6.10.4.120 you need to run the WorkstationSetup.exe file in the ‘Recorder 6 Server’ folder and choose option 2. It is not possible to use the network CD to transfer data to a network installation of Recorder 6 version 6.10.4.120 although this works for standalone installations and this problem is supposed to be fixed version 6.13.2.176.

If you wish to perform the transfer to Recorder 6 running with SQL Server 2005 please refer to the following topic on the forum http://forums.nbn.org.uk/viewtopic.php?pid=2241#p2241 for further information. This was started by Sarah Shaw on 7/12/07.

3 Transfer of data to a networked installation of Recorder 6

If you wish to transfer data from Recorder 2002 to a networked installation of Recorder 6 you need to:

- Temporarily install a ‘workstation’ on the server machine (3.1)
- Transfer Recorder 2002 data and files (3.2)
- Un-install Recorder 2002 (optional) (3.3)
- Un-install ‘workstation’ on server machine (3.4)

3.1 Temporarily install a ‘workstation’ on the server machine

To do this, navigate to the WorkstationSetup.exe file in the ‘Recorder 6 Server’ folder (default name but you may have chosen a different one when you installed) on the server machine. Double click on the WorkstationSetup.exe file. The following screen should appear:
Click on option <1>. This will begin a wizard that will guide you through installing a workstation. The next screen asks you where you want to place the ‘Recorder 6 Workstation’ folder. Choose somewhere local and click <next>

The following screen is then displayed:
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Select a spatial reference system (it is not really important which you choose as you will be uninstalling the workstation once you have transferred the data and files you need from Recorder 2002) and click <install>

The following screen is then displayed:

Click <Continue>. The wizard will then begin installing ‘Recorder system components’. Depending on your set up, the following screen may be displayed:
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In this instance, click <ok>. This should not pose any problems for your purposes.

Finally, click <Finish>.

The Recorder 6 icon should now appear on the desktop of the server machine.
3.2 Transfer Recorder 2002 data and files

Now you have installed a ‘workstation’ on the server machine, you can proceed to use the WorkstationSetup.exe file to transfer the data and any appropriate files over to your Recorder 6 installation. Once again, navigate to the ‘Recorder 6 Server’ folder on the server machine and double click on the WorkstationSetup.exe file.

Options 2 and 3 should now become available.

Click on option <2>. The following screen should appear:
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Please read the information displayed before proceeding. As described, you can repeat the process of transferring data and files (although in this case you won’t be using the CD). Every time you run the transfer process this over-writes your current Recorder 6 database so you need to be completely happy with the data and files that have been transferred over before you begin to add live data using Recorder 6, and before you remove your Recorder 2002 system. It is advisable to back up your Recorder 2002 system before uninstalling it.

Click <Next>

In the following screen you need to specify the location of your Recorder 2002 database and also the folders that contain any of the files that you wish to transfer. Both the files and database need to be on the local (server) machine. In the situation illustrated here the files were held on the server machine in a shared folder ‘Recorder_2002_Server’ on the D:\ drive (see screenshot below):
Firstly, click on the ... button, browse to the Recorder 2002 database folder and click ok. Then select the files that you also wish to transfer over to Recorder 6, e.g. map files, map polygon layer files etc. Do this by clicking on the check-box on the left hand side of each file type and then click on ... button to select the relevant folder location and click ok. Then click <Next>. The transfer settings options continue on to the next screen:

Please note: due to the differences in database structure, it is unlikely that reports previously created and saved in Recorder 2002 will still work in Recorder 6. We
therefore advise against transferring Recorder 2002 reports to Recorder 6 and plan to remove this option from future installation CDs.

Once you have selected all the files (and their locations) that you wish to transfer click <Next>. The following screen is then displayed:

![Login Options](image)

Depending on how you have set up your instance of SQL Server and installation of Recorder 6, select to use either a ‘trusted connection’ or a SQL Server login (e.g. ‘sa’) and password to transfer data from Recorder 2002 to Recorder 6. Then click <Transfer>.

The transfer process may take some time to run, depending on how much data you have in Recorder 2002.

A final screen is then displayed:
This screen provides counts of the items that have been transferred. If any errors are encountered during the transfer process, the records that failed to transfer are copied to a Microsoft Access database UpgradeErrors.mdb which is stored in the Recorder 2002 database folder. The results should be checked as specified in Section 5. If any user added data failed to transfer it will need to be investigated and corrected in Recorder 2002 before re-running the transfer. Section 6 provides assistance with resolving and correcting a number of common problems. A Recorder re-seller should be able to assist you with this if you are unsure about how to proceed.

Note that before re-running the transfer you may need to delete UpgradeErrors.mdb and create a new empty one using Access as the data it contains is not always removed by the transfer process.

To exit the transfer wizard, uncheck the box next to ‘Launch Recorder 6 now’ and click <Main Menu>. Then click on option <5> to exit.

### 3.3 Un-installation of Recorder 2002 (optional)

Important: Once you have performed the transfer to your satisfaction do not continue to add data in Recorder 2002 – if you do you will need to perform the transfer to Recorder 6 again but if you do this records input directly to Recorder 6 will be lost.

The easiest way to prevent Recorder 2002 from being used for data entry once you have gone live with Recorder 6 is to uninstall it. If you don’t remove Recorder 2002, you will get a message warning you not to enter live data into both systems every time you open Recorder 6.

Note: Ensure you have an up to date copy of your Recorder 2002 database and any files you wish to keep before uninstalling Recorder 2002.
Recorder 2002 can be uninstalled using the facilities available with that system or with the facilities available with Recorder 6. For the former, see the Recorder 2002 help. The required information can be found under the Contents tab: Getting Started – Installing and Uninstalling – Uninstalling.

If Recorder 2002 is installed on the Recorder 6 server machine, you can uninstall it using the Recorder 6 facilities. To do this you need to have a ‘workstation’ installed on your server machine. You should only do this once you are happy that you have all the data and files you need from Recorder 2002 now in Recorder 6. You can choose to remove Recorder 2002 at this stage, or alternatively remove the ‘workstation’ from the server machine, use Recorder 6 for a while and then uninstall Recorder 2002 later.

If you do decide to keep Recorder 2002 a little while longer go to Section 3.4 Uninstallation of ‘workstation’ on server machine.

To remove Recorder 2002, navigate to the ‘Recorder 6 Server’ folder on the server machine and double click on the WorkstationSetup.exe file. Click on option <3> (see screenshot below):

![Welcome to Recorder 6 Workstation Setup](image)

This setup application is for the installation of Recorder 6 on a workstation and the transfer of data from Recorder 2002.

1. Install Recorder 6 Workstation on this machine.
2. Copy data from Recorder 2002 into this copy of Recorder 6.
3. Remove Recorder 2002 from your machine.
5. Exit.

The following screen will then be displayed:
You can select to save a copy of your Recorder 2002 database here (as a .zip file). If you wish to do this leave this option checked (as default) and click … button, navigate to the Recorder 2002 database and return the appropriate file path. Then click on the next … button under ‘Archive file name and path’ and select a file path to store the .zip file that will be created.

Then click <Remove>. Your installation of Recorder 2002 will then be removed (see screenshot below):

Once this has completed the following screen is displayed:
Click on <Main Menu> and then option <5> to exit the wizard.

3.4 Un-installation of ‘workstation’ on server machine

Once you are happy with the data and files that you have transferred from Recorder 2002 to Recorder 6 (and also perhaps once you have removed Recorder 2002 – see Section 3.3 above) we can now remove the ‘workstation’ that we temporarily installed on the server machine. Note that this should only be done if the workstation install you did in 3.1 was a temporary measure purely for the data transfer. To do this, go to Start – (Settings –) Control Panel. Double click on ‘Add or Remove Programs’ (see below):

This will bring up the following screen:
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Select ‘Recorder 6 Workstation (remove only)’ and click <Remove>. When the ‘workstation’ has been removed from the server machine the following screen will be displayed:

Click <Finish>.
4 Transfer of data to a standalone installation of Recorder 6

To transfer data and files from Recorder 2002 to a standalone installation of Recorder 6 (version 6.13.2) insert the standalone CD. The following screen should be displayed. (if this screen does not appear automatically use Windows Explorer to double click on the CD drive):

Click on option <2>. The next screen is shown below:
Please read the information displayed before proceeding. As described, you can repeat the process of transferring data and files. Every time you run the transfer process this over-writes your current Recorder 6 database so you need to be completely happy with the data and files that have been transferred over before you begin to add live data using Recorder 6, and before you remove your Recorder 2002 system. It is advisable to back up your Recorder 2002 system before uninstalling it.

Click <Next>.

In the following screen you need to specify the location of your Recorder 2002 database and also the folders that contain any of the files that you wish to transfer. Both the files and database need to be on the local machine. In the situation illustrated here the files were in C:\Program Files\Recorder_2002 (see screenshot below):

If your files are held elsewhere on another machine, it is probably best to copy the entire contents of the Recorder 2002 folder to the desktop or perhaps a “temp” folder on the C:\ drive.

Firstly, click on the … button, browse to the Recorder 2002 database folder and click ok. Then select the files that you also wish to transfer over to Recorder 6, e.g. Map Files, Map Polygon Layer Files etc. Do this by clicking on the check-box on the left hand side of each file type and then click on … button to select the relevant folder location and click ok. Then click <Next>. The transfer settings options continue on to the next screen:
Please note: due to the differences in database structure, it is unlikely that reports previously created and saved in Recorder 2002 will still work in Recorder 6. We therefore advise against transferring Recorder 2002 reports to Recorder 6 and plan to remove this option from future installation CDs.

Once you have selected all the files (and their locations) that you wish to transfer click <Next>. The following screen is then displayed:

Depending on how you have set up your instance of SQL Server and installation of Recorder 6, select to use either a ‘trusted connection’ or a SQL Server login (e.g. ‘sa’).
and password to transfer data from **Recorder 2002** to **Recorder 6**. You will be able to login to a default instance of MSDE (as installed by the standalone CD, up to and including v6.13 but later versions will install SQL Server 2005 Express) by selecting the ‘sa’ login and leaving the password blank (blank passwords aren’t allowed with SQL Server Express). Then click <Transfer>.

The transfer process may take some time to run, depending on how much data you have in **Recorder 2002**.

A final screen is then displayed:

![Data Migration Complete](image)

This screen provides counts of the items that have been transferred. If any errors are encountered during the transfer process, the records that failed to transfer are copied to a Microsoft Access database UpgradeErrors.mdb which is stored in the **Recorder 2002** database folder. The results should be checked as specified in Section 5. If any user added data failed to transfer it will need to be investigated and corrected in **Recorder 2002** before re-running the transfer. Section 6 provides assistance with resolving and correcting a number of common problems. A Recorder re-seller should be able to assist you with this if you are unsure about how to proceed.

Note that before re-running the transfer you may need to delete UpgradeErrors.mdb and create a new empty one using Access as the data it contains is not always removed by the transfer process.

To exit the transfer wizard, uncheck the box next to ‘Launch Recorder 6 now’ and click <Main Menu>. Then click on option <5> to exit.
5 Checking data transfers

Start by checking the statistics on the Welcome screen that appears by default when you open Recorder 6. If this facility has been switched off Help – Summary Info will open the required window. These statistics should be the same in Recorder 2002 and Recorder 6 although if the import wizard has never been installed in Recorder 2002 it won’t contain the vice-counties so the number of locations in Recorder 2002 will be 155 less than in Recorder 6. If these statistics aren’t the same there are problems that need to be resolved. Things that haven’t transferred will be in UpgradeErrors.mdb in the Recorder 2002 database folder unless a problem like a database corruption is present.

Note that ‘Data Migration Complete’ window that appears at the end of the transfer process logs the number of things that have been transferred so the items that are in a new installation of Recorder 6 (155 Locations, 12 Names and Addresses and 76 References in v6.13) will not be counted.

Note also that the statistics on the Welcome screen can mask problems, e.g. all taxon occurrences may transfer but not all taxon determinations. In this case, the number of Species observations will be correct because this is a count of the number of rows in the Taxon_occurrence table but those whose taxon determinations haven’t transferred will be incomplete as the code for the species (Taxon_list_item_Key) is held in the Taxon_determination table. Observations without determinations cannot be displayed in the observation hierarchy as there is no species name to display so they can’t be edited in Recorder 6. Because of problems like this, it is important that UpgradeErrors.mdb is always checked but users will need some (very basic) knowledge of Access for this task.

5.1 System-supplied items

If UpgradeErrors.mdb only contains genuine system-supplied items, there are no corruptions in your Recorder 2002 system and the statistics are correct, then your Recorder 2002 data should all have transferred to Recorder 6. Some data in Recorder, e.g. locations, record types and measurement qualifiers, are classed as either system-supplied (System_supplied_data = –1 for yes) or user added (System_supplied_data = 0 for no). Unfortunately some system-supplied items always appear in UpgradeErrors.mdb but these can safely be ignored as you shouldn’t change them anyway. They won’t affect the transfer of your data because the necessary rows are already in Recorder 6. There is a little more information about these at the end of the post on the NBN Forum by Stuart Ball, 11/10/2006, http://forums.nbn.org.uk/viewtopic.php?pid=802#p802.

User added data always has keys starting with the 8-character Recorder Site ID that is the unique identifier for the copy of the system to which the data was originally entered. Most Site IDs in user added data start with CCW, DSS, IC, LC, SR or WA indicating which re-seller supplied them, although there are other prefixes.

The following system-supplied items in UpgradeErrors.mdb can be safely ignored:

- Anything starting ‘NBNSYS’, ‘NHMSYS’ or ‘BMSSYS’ in:
  - Biotope_list_item
  - Index_taxon_group
• Index_taxon_synonym
• Measurement_type_context
• Taxon_common_name
• Taxon_list_item
• Taxon_version

Anything starting ‘JNCCIMPW’ in:
• Location
• Location_admin_areas
• Location_name
• Location_type

All other items in UpgradeErrors.mdb should be investigated and resolved in Recorder 2002 prior to transferring the data again. Help is provided in Section 6.

Note that there are cases of user added data being flagged in error as system-supplied. This causes problems with data transfers for which the solution is in Section 6.

5.2 NBNData.mdb

Installing Recorder 6 should create an Access database called NBNData.mdb or nbndata.mdb in the Recorder 6 Database folder but this phase of an installation doesn’t always work. Also, the Network Installation Guide recommends that it be removed if users are concerned about the security threat it poses. NBNData.mdb contains links to all the tables in the Recorder 6 SQL Server database and provides an easy way of viewing data in the system for those who know some Access, in which case it will be very useful for checking transfers and resolving problems. A tool is available for creating this when it doesn’t exist and documentation is available on using it. Alternatively, SQL Server tools like Enterprise Manager (SQL Server 2000) or SQL Server Management Studio (SQL Server 2005) can be used.

5.3 User added taxa

The entries for user added species in Index_taxon_name do not transfer but this can be rectified by rebuilding the taxon indexes, as required after taxon dictionary upgrades. To do this, run each of Tools – Database Tools – Rebuild Taxon Group Index/ Name Index/ Synonym Index in turn. If this isn’t done it won’t be possible to see the observations for user added species in the observation hierarchy or to include them in reports as the system uses Index_taxon_name to find the species names. Users may find that some of their user added species are in the system-supplied lists in Recorder 6. Where this is the case the user added species should be removed using Tools – Database Tools – Merge Data Items so that these observations can be exported, if required. Also, user added species don’t have a taxon group associated with them so they may not appear in certain types of reports. User added species are the ones with Taxon_list_item_keys starting with the user’s Site ID.
6 Possible problems with data transfers

Various problems can occur with data transfers, a selection of which are listed below. Some were taken from the post on the NBN Forum by Stuart Ball, 11/10/2006, http://forums.nbn.org.uk/viewtopic.php?pid=802#p802. This post includes reference to problems with Changed_date being 00:00 but this was fixed in subsequent versions of the transfer process.

6.1 Recorder 2002 database corruptions

If compacting your Recorder 2002 database using Tools – Database Tools – Compact in Recorder 2002 produces an unhandled error: “E OleException : Record(s) can't be read; no read permission on 'c:\RECORD~2\Database\nbndata.mdb'
E JNCCDatabaseError : Unable to compact database” then one or more corruptions are present. Access databases should be compacted regularly to reduce their size and to check for corruptions so that they can be cleared as soon as possible when present.

Corruptions usually occur in Memo fields and most of the comments and descriptions in Recorder 2002 are fields of this type. Corruptions are often traced to the comment on a taxon occurrence or taxon determination which appears as #Error. This can go undetected in Recorder 2002 although performing certain functions that involve the corrupt entry will sometimes result in an unhandled error. Note that corruptions often cause the statistics on the Welcome screen to be incorrect although they are rarely out by more than one.

To clear a corruption in your live system, back up the Recorder 2002 databases, then use Tools – Database Tools – Compact in Recorder 2002. This will fail with an unhandled error but it will have created a temporary database called Temp.mdb in the Recorder 2002 Database folder which is the Recorder 2002 database with the corruption cleared. Delete the original nbndata.mdb and rename Temp.mdb nbndata.mdb. The comment will have been lost when the corruption occurred and will now appear as ##################### – edit as required. These items can be difficult to find but techniques are available, if required.

6.2 UpgradeErrors.mdb

If whilst transferring records to a networked installation of Recorder 6 you receive an error message like “Could not find file ‘R:\Recorder 2002\Database\UpgradeErrors.mdb’ ”, check that the following file exists on the server machine:

Recorder 6 Server\Workstation Setup\Database\NBNData.mdb

If this file does not exist, copy this file to the above location from \System\Database on the network installation CD, then try to perform the transfer again.

If this doesn’t work, create a Microsoft Access database called UpgradeErrors.mdb in the folder containing your Recorder 2002 databases, using whatever version of Access you have, or contact a reseller for advice.
6.3 ODBC connection failed

It is not uncommon for a transfer to display a message like “ODBC—connection to ‘SQL ServerRDLEGSEC’ failed” after it has been running for some time. Clicking OK returns the Login Options window where clicking Cancel produces a message about aborting the transfer. You have to click Yes to abort the transfer at this point despite the warning otherwise the transfer starts again but, provided the transfer has been running for some time, investigations usually show that all the data has transferred except the items in UpgradeErrors.mdb.

To check a transfer in this situation you need to check the numbers of entries in many of the tables, particularly those at the bottom of hierarchies, e.g. Taxon_determination, Taxon_occurrence_data, Taxon_occurrence_relation, Specimen and Taxon_occurrence_sources, i.e. the tables that contain the data displayed on the tabs for a taxon occurrence in the observation hierarchy in Recorder 6. If the number of entries in tables like these are the same in Recorder 2002 and Recorder 6 then the transfer will have worked as a taxon determination can’t be added to the Recorder 6 database unless its taxon occurrence has been added, a taxon occurrence can’t be added unless its sample has been added and so on up the hierarchy. However, a Recorder 6 system may contain survey events or samples without occurrences in which case these tables would need to be checked as well. An example of this is events from the old Recorder 3 system which are transferred to Recorder 2002 as survey events with no samples or occurrences.

6.4 Invalid data and referential integrity problems

The majority of problems with data transfers are referential integrity problems as Recorder 6 enforces referential integrity more rigorously than Recorder 2002. Note that data transfers don’t revalidate data in the way that Recorder validates data being imported. However, Recorder 6, from v6.13 onwards, contains a number of facilities that enable users to revalidate their data – see the Help in Recorder 6: Help – Help takes you to the Home page of the Help where there is a section headed ‘Significant changes in Recorder 6 version 6.13’. This contains a link to the information on revalidating data which gives some examples of how data can become invalid. If you suspect that any of your data is invalid you are advised to revalidate it once it is in Recorder 6 v6.13.

Referential integrity is employed in relational databases to ensure that relationships between tables remain consistent, i.e. when one table has a foreign key to another table, this means that you can only add a record to the first table if the foreign key provided has a corresponding record in the second (linked) table. For example, a taxon determination can’t be added unless its foreign keys like the Taxon_list_item_key and the Taxon_occurrence_key already exist in the corresponding tables.

You need to bear this concept in mind when investigating why data has not transferred from Recorder 2002 to Recorder 6. The number of items that have failed to transfer (stored in UpgradeErrors.mdb) can look daunting but in many cases one small problem will have prevented numerous items from transferring. For example, if a user added record type fails to transfer to Recorder 6, as described in the next section, this will mean that all the entries in the Taxon_occurrence table that use it will not have transferred, and therefore their entries in the Taxon_determination and
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Taxon_occurrence_data tables, etc. will also not have transferred. There are several examples of this type of problem in the sections that follow.

If you can’t identify why an item hasn’t transferred you can copy and paste it from UpgradeErrors.mdb to the same table in Recorder 6 (in NBNData.mdb if you are using Access). If it has failed to transfer because of a referential integrity problem then an error message will appear indicating which foreign key is preventing it from being added.

6.5 Record types marked as system-supplied

This problem occurs due to a bug in the Import Wizard in Recorder 2002. When it creates entries in the Record_type table in the database it incorrectly marks them as system-supplied. Consequently, the transfer process does not copy them to the Recorder 6 database. Anything marked as system-supplied isn’t copied across as it is assumed to be present already in Recorder 6. Hence, any rows in the Taxon_occurrence table that contain the key for these record types in their Record_type_key field will fail to transfer and therefore their entries in the Taxon_determination and Taxon_occurrence_data tables etc. will also fail to transfer. Just one or two Record_type entries failing to transfer can cascade, resulting in thousands of other rows failing to transfer!

This is relatively easy to fix. Open your Recorder 2002 database (nbnndata.mdb) in Access and open the Record_type table. Only records with keys starting with ‘NBNSYS’ should be marked as system-supplied (–1 for yes in the System_supplied_data column). If any other records have –1 here, change this to 0 (zero) prior to re-running the transfer.

The same problem has been seen with measurement qualifiers.

6.6 Records transferred between copies of Recorder 3 with incorrect Taxon_list_item_keys

This is a pretty obscure problem ultimately due to a deficiency in the record transfer process between copies of Recorder 3, which was well known at the time. When the in-built Export/Import facilities in Recorder 3 were used to transfer records between copies, any species which had been added by the user at the source copy were not automatically transferred to the destination copy. There were ways of sending the necessary species records, but this could easily get forgotten. The consequence was records in the receiving copy of Recorder 3, which had a species key but no corresponding entry in the Species table.

When Recorder 3 data was transferred to Recorder 2002 using the ‘Bulk move’ facility, user added species were handled fully and were transferred to Recorder 2002. However, if the necessary entries did not exist in the Species table in Recorder 3 (because of failure to copy them across from the copy of Recorder 3 from which the records had been transferred), then of course there were no species details to transfer. The consequence years down the line is that the Taxon_list_item_key in the Taxon_determination table derived from Recorder 3 will have an integer (e.g. 723) instead of a 16-character NBN key.
Note that this integer is NOT the original Recorder 3 species key, but an arbitrary running integer generated by the Bulk export process when the Recorder 3 data was transferred to Recorder 2002. Such entries in the Taxon_determination table will fail to transfer to Recorder 6 because the Taxon_list_item_key specified does not exist.

You can easily check for this problem by opening your Recorder 2002 database (nbndata.mdb) using Microsoft Access and opening the Taxon_determination table. View the table sorted by the Taxon_list_item-key column. Any rows with these integer keys will be listed first and will be obvious.

One way to fix this is to track back through your archives and establish where the original Recorder 3 transfer file came from. You may be able to go back to the originator in each case and determine what the species should be and hence fully fix the problem by replacing the integers in Taxon_list_item_key with the correct key.

Another approach would simply be to delete the offending records from Recorder 2002. Globally, nothing is being lost because the records were transferred from somebody else, who presumably still has the originals in their system.

To delete these records in Recorder 2002 itself you need to insert a valid Taxon_list_item_key into this field in their preferred determination, preferably a species for which you have no records. If you have no Wolf records you could use NBNSYS0000094797 (Wolf from the Recorder 3.3 list). Without a valid key in the Taxon_list_item_key the observations can't be seen in the observation hierarchy in order to do anything about them. Doing a report on Wolf observations, filtering for them or using the GoTo key add-in will then enable you to locate them so that you can see the other data associated with them. If this problem has originated from a Recorder 3 to Recorder 2002 data transfer you may be able to correct them by referring back to Recorder 3. Make sure you correct or delete them all otherwise someone will get a surprise when they find Wolf observations in their reports.

6.7 Other Taxon_list_item_key problems

The cause of the Taxon_list_item_key problem in 6.6 is clearly identified but other similar problems have been seen. Occasionally the Taxon_list_item_key in a Taxon_determination will be blank or it will contain a key that is no longer in the Recorder 2002 taxon dictionary, or one that is in the Recorder 2002 taxon dictionary but not in the Recorder 6 dictionary. In the last case it is sometimes possible to find another key for the species that is in both dictionaries. If the Taxon_list_item_key that isn’t in the Recorder 6 dictionary is swapped for one that is in both the records will then transfer. The first two cases will need to be handled as specified in the last paragraph in Section 6.6.

The blank Taxon_list_item_keys are believed to stem from the 96 species for which records can be input to Recorder 3 but not to Recorder 2002 using the Recorder 3.3 list. An example of this problem is a species like Mistle/Song Thrush, Turdus viscivorus/philomelos. Both T. viscivorus and T. philomelos are in Recorder 2002 but records cannot be input with a species of Turdus viscivorus/philomelos using the Recorder 3 list although they can in Recorder 3 itself. If these aren’t corrected at the
time, the Taxon_list_item_keys for the associated records are believed to be left blank by the transfer.

6.8 **Biotope_list_item_key problems**

As well as problems with missing Taxon_list_item_keys there are similar problems with Biotope_list_item_keys. In one transfer the Biotope_list_item_key in rejected Biotope_determinations contained NBNSYS0000001010 which is not in Recorder 2002 or Recorder 6. It was found it in the old Recorder 3 system. It is the internal code for revision 1 of the biotope E161 ‘Bog: blanket’. Revision 2 – NBNSYS0000006143 – is in both systems so when NBNSYS0000001010 was changed to NBNSYS0000006143 in the Biotope_list_item_key in the Biotope_determinations in Recorder 2002 these items transferred to Recorder 6.

6.9 **Missing Taxon_occurrences**

In several data transfers problems with Taxon_determinations have been traced to them not having Taxon_occurrences in Recorder 2002. Presumably a problem existed in Recorder 2002 at some stage that allowed this to happen. You may be able to use other data in the taxon determination to track down the problem otherwise you may have no choice but to ignore instances of this error. It may be possible to locate the Taxon_occurrences in old backups.

6.10 **Missing Taxon_determinations**

Tests have revealed that some Recorder 2002 systems contain Taxon_occurrences without Taxon_determinations, although this isn’t detected by data transfers. How this has happened is unknown but without a Taxon_determination the observations can’t be seen in the observation hierarchy in order to do anything about them.

If these observations aren’t corrected in Recorder 2002, then the Taxon_occurrences will be deleted in Recorder 6 when you do an import. If users aren’t aware that this happens the statistics after an import may look as though not all the data has been imported.

7 **Conclusion**

The Recorder 2002 to Recorder 6 data transfer facility on the Recorder 6 installation CDs provides an effective tool for this type of transfer which is much more straightforward than Recorder 3 data transfers. Although this document covers a variety of problems that can be encountered it is not uncommon for transfers of smaller datasets to be done without encountering any of the problems specified. Thus, for these users there is a good chance that they will be able to complete their transfer without any additional assistance.

Users with larger datasets are likely to encounter a small number of the problems listed in Section 6 or some variation on them but it is hoped that this section provides enough
information to enable them to correct the problems in Recorder 2002 so that a subsequent transfer will be satisfactory.

If Recorder 2002 users have the time and a little Access expertise, they are recommended to attempt the transfer themselves using the instructions in the appropriate sections above, paying particular attention to the information on compacting Recorder 2002 databases. If they encounter problems they can’t resolve they can seek help from other users via the Recorder section of the NBN forum http://forums.nbn.org.uk/. Alternatively, help is available from some of the Recorder suppliers listed on the Recorder Software website www.recordersoftware.org for a fee.

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