BioNumerics Tutorial:

Taking backups from a BioNumerics database

1 Aims

To prevent against accidental data loss, it is important to take backups on regular intervals. Taking a backup of a database created by BioNumerics is very easy, as will be illustrated in this tutorial.

Taking backups of a shared database that was created in a database management software and to which BioNumerics was connected via ODBC is slightly more complex and beyond the scope of this tutorial. Please see the tutorial **Setting up a database for multi-user access** for instructions.

2 Creating a database backup

A complete BioNumerics database backup, including all data stored in the relational database and in the source files directory can be created in just a few steps:

1. In the *BioNumerics Startup* window, highlight the database of which you want to create a backup.

2. Press the ![icon] button and select ***Backup database...***.

3. Browse for a ***Destination folder***. By default, the BioNumerics home directory will be selected.

4. Press *<**OK**>* to start creating the backup file.

The software will report when the backup is complete. Depending on the size of the database, the process can take a few seconds up to several minutes. The backup file has the extension bnbk and its name consists of the original database name with a date suffix added.

3 Restoring a database backup

3.1 Usage scenarios

Restoring a BioNumerics database from a backup file is also an easy process. Two different usage scenarios can be discerned:

- **Overwriting an existing database:** A selected database is overwritten with the content of the backup file. This is useful for disaster recovery, in which a database is rolled back to an earlier state, contained in the backup file.

- **Copying a database:** A new database will be created, with the data that are present in the backup file. This can be used for example to transfer a complete database from one computer to another.

Both usage scenarios are explained in the following paragraphs.

3.2   Overwriting an existing database

To overwrite an existing database with the data from a backup file, proceed as follows:

1. In the *BioNumerics Startup* window, highlight the database that you want to overwrite.

2. Press the ⬚ button and select ***Restore database...***.

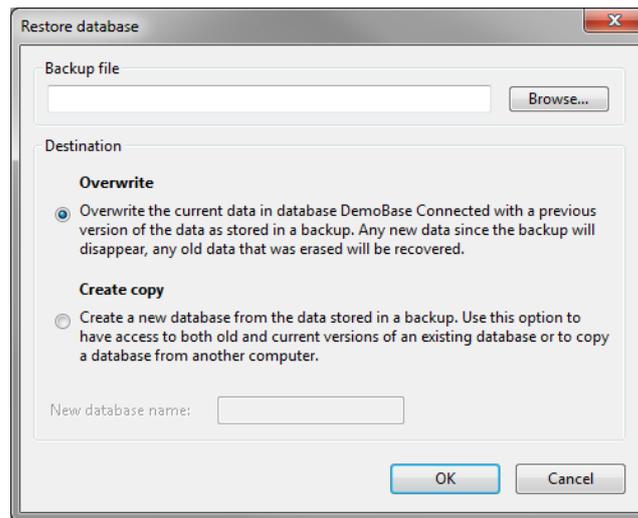The *Restore database dialog box* appears (see Figure 1).

Figure 1: The *Restore database dialog box*.

3. Browse for the backup file via the <***Browse***> button.

⚠ Check the name of the backup file to see if it corresponds to the highlighted database in the *BioNumerics Startup* window before proceeding. The software will **not** compare the database name with the name of the backup file, meaning that any database can be overwritten with any backup file. Please note that there is no undo function available for overwriting databases!

4. Check the ***Overwrite*** option and press <***OK***>.

The software will ask for confirmation before actually overwriting the database.

5. Press <***Yes***> to proceed.

When the database is overwritten (the process can take up to several minutes), the software will offer to open the database.

6. Press <***Yes***> to open the database and to start working with it.

3.3   Copying a database

To create a new database with the data from a backup file, proceed as follows:

7. In the *BioNumerics Startup* window, press the ⬚ button and select ***Restore database...***.

The *Restore database dialog box* appears (see Figure 1).

For technical reasons, a database should be highlighted before the ***Restore database...*** command can be executed. Therefore, a database cannot be restored in an empty home directory. A workaround is to create a "dummy" database first, which can later be deleted.

8. Browse for the backup file via the <***Browse***> button.

9. Check the ***Copy*** option and enter a name for the new database. The name should be different from any existing database.

10. Press <***OK***> to create a new database with the data from the backup file.

When all data are copied to the new database (which can take up to several minutes), the software will offer to open the newly created database.

11. Press <***Yes***> to open the database and to start working with it.