

## APPENDIX E – Backing up data

### 1. Working on LINUX

#### i. Backing up to an external disk drive

Data will be collected from the stations on 2GB or 4GB compact flash cards and offloaded to the field laptop using **neo** in zip format.

- a. Create a directory in /data or /your\_data directories to hold the offloaded data. **It is important that a separate directory be created for each service run.** The directory should be named, for example, /data/CAFE01DISK02. This would indicate data from the CAFE experiment, service run 01, and disk 2.
- b. Run **neo**, setting the ‘Destination and Format’ to the directory created above, and the format to ‘Zip’.

NOTE: If you wish to generate log files, select **MODE -> Generate log files**. This will cause the offload to run slower. It is faster to run **neo** for this purpose once the zipping is done.

- c. Once all of the flash cards have been off-loaded, disconnect the CF card reader.
- d. Connect the mobile disk first, then turn on the power using the small switch on the back of the drive enclosure (if it has one).
- e. On Linux machines, the drive should auto-mount at /media/MOBILE01 or /media/MOBILE02. If the disk does not mount, double click on ‘Computer’ then right click on ‘XXXGB External Hard Drive’ and select mount.
- f. Copy the entire directory that you created above using one of the following examples:

```
<my_cpu> cp -r /data/CAFE01DISK02 /media/MOBILE02
```

OR

```
<my_cpu> tar -cf -./* | (cd /media/MOBILE02; tar -xf -)  
(this option may be faster)
```

Now that the data is ready for backup, you can proceed to extract it from the .zip file for further processing.

#### ii. Backing up to DVD

Data from RT130 dataloggers will be collected from the stations on compact flash cards,

off-loaded to a directory using the **neo** program in zip format, organized using the program **chunky**, and written to DVD using the program **k3b**.

Run **neo**, setting the 'Destination:' to `"/data"`, `"/your_data"`, or whatever you prefer, and the format to 'Zip'. This will cause the off-load to run slower. It is faster to run **neo** once the Zipping is done.

- a. After all of the compact flash cards have been off-loaded, create a directory at the same level as the above directory (`"/data"`). This will hold the links created by **chunky** to the zipped data files.
- b. Change into the directory you just made and run the **chunky** command.

For example:

```
<my_cpu> chunky -s CAFE01 -d /data/CAFE01
```

Where: `/data/CAFE01` is the first directory created above and `01` indicates service run 1.

- c. Launch the **k3b** program, **Applications -> Sound & Video -> k3b** and burn the directories created above, one per DVD.
- d. Be sure to set **follow links**, and **Rock Ridge** and **Joliet** format.
- e. Be sure to label each DVD with the name of the directory that was burned to DVD. As an example `CAFE01DISK01`, would indicate the first DVD burned from the first service run.

Now that the data is ready for backup, you can proceed to extract your data from the zip file for further processing.

## 2. Working on MAC OS

On MAC OS X machines, the drive or DVD should auto-mount. Steps a. to d are the same as for the LINUX description defined previously. On MAC there are multiple options to make secure backup of your data (SuperDuper!, DiskUtility, SilverKeeper, etc). Procedures to back up securely your data may vary depending on which tool you are using, thus, if you have questions about it, please let us know which tool you are trying to use and we will try to guide you through the steps although most of these tools have simple manual pages to do so.

## 3. Working on Solaris

The easiest way to back up your files into an external drive is by tar-ing them. However, that's still easier under Solaris 10 than 8 or 9 due to the improved USB support under Solaris 10.

Backing up to DVD from a Sun is a bit verbose. You must run a command to make an ISO image of the files, then burn that file to the DVD if you have the correct DVD software installed. Under Solaris 10 it is easier than in previous versions but it's certainly not trivial from the command line, and the GUI for it is a bit hard to follow (contribution by Michael Love).