

Nagg Tool Output Directory Option Requirements, Implementation and Validation Specifications

1. Purpose and Author

1.1. Purpose

This document specifies the requirements, implementation and validation specification of the Output Directory option of the Nagg tool. It first shows User stories of the need of this option, then lists the specifications of requirements, implementation and validation.

1.2. Author

Albert Cheng of The HDF Group.

2. User Stories

The Nagg tool aggregate or de-aggregate NPP files to produce new NPP files. The new output files are created in the current directory by default. Users have requested an option to create the output files in a separated directory because of several reasons:

- They may not want the new files mingled with the old input files.
- They may want the new files created in different directories according to different Nagg options. For example, using the same batch of input files, they may want the output files in the packaged format created in the Packed directory and the output files in the unpackaged format created in the Unpacked directory.
- They may not have write permission in the directory where the input files are but can direct the Nagg tool to create the output files in a separated directory to which they have write permission.

3. Requirement Specification

3.1. Option Syntax

The output directory option is in the form of:

`-d <directory>, --directory=<directory>`

`<directory>` is name of an existing directory in which the output NPP files are created.

3.2. Function Specification

When this option is given, Nagg tool will create all output files in the `<directory>` instead of the current directory. The output directory, `<directory>`, should exist already and permit the Nagg to create files in it.

4. Implementation Design

The current release version 1.2.0 of the Nagg tool recognizes the Output Directory option (`-d, --directory`) but does nothing else. The `compose_output_fname()` function should be changed to insert the given output directory name and a directory separator ("/") to the front of each generated output file name when `-d` option is specified.

5. Validation Specification

The following tests will be implemented to validate the function of the -d option.

1. -d is optional: it is not an error if -d is not given. The Nagg tool creates output files in the current directory.
2. -d parameter is required: it is an error if -d is given without the <directory> parameter.
3. -d <directory> works: the output files are all created in <directory> and are not created in current directory.
4. Redundant case: the "-d ." will create output files in current directory, same as the default setting.
5. Bad directory cases: Nagg fails if <directory> is bad. For example, non-existing directory such as /nosuch or non-writable directory such as /usr.

Revisions

First draft on June 22, 2012 by Albert Cheng