Command Format Specification

The Command Format Specification is a system for delivering arguments to DHN Exec for building a GUI that corresponds to a command line utility's arguments. DHN Exec builds and optionally executes the GUI-generated command line(s).

Per convention, calling the command-line utility with no arguments should return standard usage information to the terminal.

Call the command-line utility with the single argument "-command_format" to get the following (in stderr):

arg: arg_name (arg_type) *(it) (opt)*
   :
arg: arg_name (arg_type) *(it) (opt)*
flag: va
flag: rar
flag: rc
flag: cs
ver: 1.0

An "arg_name" is a string with argument name (no white space characters). Italicized components above need not be present

Argument Types

(int): integer
(int+): integer primary, but also allow text (special values)
(float): floating point number
(float+): floating point primary, but also allow text (special values)
(tern): ternary value
(str): string
(file): file
(dir): directory
(path): file or directory
(pass): password (this field type is not iterable)
(vararg): user specified argument type or option
(option): an option can be explicitly requested, but this is usually invoked as an optional
   vararg

"(it)" indicates the argument is iterable
"(opt)" indicates the argument is optional

Flag Types

Flags are codes to DHN Exec to perform other specific actions:
"flag: va": display a "Vararg" button (allow user to add arguments or options)
"flag: rar": "run as root", display a "Sudo PW" button (if not already known)
"flag: rc": display an "Edit RC" button
"flag: cs": display an "Edit CS" button

Other flags may be added in the future functions, such as submission to a job distributor

Version Information

If present, the "ver" field indicates the software version.

Example C Code

```c
// standard usage
if (argc < 2 || argc > 9) {
        G_extract_path_parts_m12(argv[0], NULL, out_dir, NULL);
        printf("%c\n\t%s version %hhu.%hhu\n\n\tUSAGE: %s MED_directory (multiple w/ regex
        [output_directory] [start_time] [end_time] [start_samp_num] [end_samp_num] [password]
        [samp_num_ref_chan]\n\n", 7, out_dir, MED2RAW_VER_MAJOR, MED2RAW_VER_MINOR, argv[0]);
        return(0);
}

// command format output
if (argc == 2) {
        if (strcmp(argv[1], "-command_format") == 0) {
                fprintf(stderr, "arg: MED_directory (dir) (it)\narg: output_directory (dir) (opt)
                \narg: start_time (int) (opt)\narg: end_time (int) (opt)\narg: start_samp_num (int)
                (opt)\narg: end_samp_num (int) (opt)\narg: password (str) (opt)\narg:
                samp_num_ref_chan (str) (opt)\nver: %hhu.%hhu\n", MED2RAW_VER_MAJOR,
                MED2RAW_VER_MINOR);
                return(0);
        }
}
```