ZARC

FSCK USERS' GUIDE

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Last updated: 4/11/2022

1 REVISION HISTORY

1 – initial release (fsck V1.0)

2 – updated to include "/s" option (fsck V1.1).

2 DESCRIPTION

"FSCK" is an abbreviation for File System Consistency checK), as commonly found on Unix and Linux systems. This programme scans a CP/M 2.2 file system, and reports any error it finds. It does not attempt any kind of repairs. FSCK.COM is intended to run under CP/M 2.2. It should run under any such system.

In this document, the following style conventions are used:

```
Machine output
User commands
Comments
```

3 USAGE

The command format is:

```
fsck <drive>[:] [/s]
```

The colon after the drive letter is optional. The "/s" option enables a surface scan to be performed after the file system check. The option may also be entered as "$s" or "[s]". The entire command line is not sensitive to case. The following commands are all equivalent:

```
fsck b /s
fsck b:/s
fsck b: $S
FSCK b: [s]
```

The command "fsck" with no parameters will result in a terse reminder of the command format.

```
fsck
```

```
*** CP/M File System Checker V1.1 ***
Operand error. Expected format: fsck <drive>[:] [/s]
Returning to CP/M.
```

Example:

```
A>fsck b: /s
*** CP/M File System Checker V1.1 ***

Directory checks complete
Errors and warnings: 0
Files found: 32
Unused directory entries: 477
Blocks used: 100

Block map ('D': directory, 'F': file and '-': unused).
DDDDDDDDFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFF----------------------------------------------------------------
--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
--------------------------------

Checking all blocks are readable (surface scan)
Track: 95
Scan complete
Returning to CP/M.
```

Each directory entry is scanned in turn, and a list (internally called files_info) is constructed with one entry per file. This contains a bitmap of physical extents encountered, so it is possible to discover "holes" (also known as sparse files) as well as duplicated extents. Once the directory scan is complete, a block map is displayed. This shows how blocks are distributed on the disk. Finally, an optional surface scan is performed to ensure that all sectors are readable. This includes sectors not allocated to any file.

4 FURTHER DEVELOPMENT

So far, this programme has only been tested on ZARC. It would be interesting to try it on a period Z80 CP/M system.