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Disk Copy 4.2: Error When Using DOS Formatted Disks (11/94)

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TOPIC -----

When trying to make images using Disk Copy 4.2 and DOS formatted or unformatted 800K diskettes under system 7.1.2 and 7.5, our customer gets a -72 error (bad data mark checksum).

I would like to know:

1. Short of pre-formatting each diskette or buying diskettes pre-formatted for Macintosh, what, if any, is a workaround?
2. What does this error (-72) mean in this context and more importantly, what causes it to happen?
3. Is the data on the disk reliable?
4. Will this be addressed in a future version of Disk Copy, System Update or a hardware revision of some sort? If so, what and when, roughly.

DISCUSSION -----

I have verified the symptoms you describe. The problem stems from the fact that Disk Copy does NOT format the disk before writing the track information. Since DOS formatted disks have different structures than Macintosh disks, when you write a disk track by track, some vestiges of the DOS format are left on the disk. This will usually not present a problem unless you are using a program that does sector read for verification purposes. When the disk is read by sector, the "left-over" DOS formatting information is read as valid data, which causes a checksum error.

The data is reliable when the -72 error is SPECIFICALLY caused by the vestiges of the DOS format. However, if the data has some other error on the disk which generates the -72 error, then the reliability of the data is in question. There is no way to determine the cause of the -72 error (i.e. "left-over" DOS format or data integrity error). So, to answer your questions:

1. There is no work-around other than formatting the disks. (Or buying

pre-formatted disks)

2. The -72 error simply means that the image checksum and the actual floppy checksum did not match. The checksum is a data verification process whereby (simplistically speaking) a number is generated from the data. When the data is verified a new checksum is generated from the data and compared with the old checksum. If they don't match, it means something in the data has changed. As for what causes it to happen in this particular case, see the discussion above - there are some data left from the DOS format that is not getting written over when Disk Copy does it's thing. Disk Copy then sector verifies the disk, reading the DOS information left over, and calculates the checksum. Since there is now additional data - from the DOS data left over - the checksums don't match, hence the error.
3. IF the SOLE cause of the -72 error is the vestiges of DOS information, then yes, the data is reliable. How can you tell? You can't.
4. Unknown, as I have not been able to talk with the programmer at this time though it is unlikely that additional resources will be assigned to this issue.

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