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## Floppy disk (MFM) data separator design?

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11-10-2003, 05:51 PM

Mark Zenier  
Guest  
Posts: n/a

In article <(E-Mail Removed)>, Mike <(E-Mail Removed)> wrote:  
>The missing information is how to synchronize to the data pattern so you  
>get the right bit. At the start of each sector, there's a preamble, which  
>is a simple repeating pattern that the PLL uses to acquire timing. After  
>that, there's an address mark, which is a fixed pattern that's different  
>than the preamble. The preamble and address mark are the same for every  
>sector on the disk. Following the address mark is the data - a fixed number  
>of bytes. Following the data are one or two CRC bytes to check for data  
>corruption.

Actually there are at least three different address marks, (all of which violate the MFM encoding rules so that they can be easily detected by hardware). One encoding for the sector's address record, one for the data field, and one for "deleted" data fields. The deleted fields are now used for marking bad sectors, but have had different uses. (The format originated with a pretty brainless data entry system to replace punched cards.)

Mark Zenier ([E-Mail Removed](#)) Washington State resident



11-10-2003, 09:25 PM

Fred Abse  
Guest  
Posts: **n/a**

On Sun, 09 Nov 2003 14:39:17 -0500, Roy J. Tellason wrote:

> They were 300 RPM..

THAT'S what I was trying to remember.

--

Then there's duct tape ...  
(Garrison Keillor)  
([E-Mail Removed](#))



11-12-2003, 02:16 PM

Mike  
Guest  
Posts: **n/a**

On Mon, 10 Nov 2003 18:51:44 GMT, Mark Zenier wrote:

> In article <(E-Mail Removed)>,  
> Mike <(E-Mail Removed)> wrote:  
>>The missing information is how to synchronize to the data  
>>pattern so you  
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>are now  
> used for marking bad sectors, but have had different uses.  
>(The format  
> originated with a pretty brainless data entry system to  
>replace punched  
> cards.)

You're thinking of something different, or thinking of drives

other than those used in PCs. The MFM data separator chips I worked on didn't pass on anything to the controller until after the address mark. There were two possible address marks, as I recall, but the choice was hard wired by the drive maker.

-- Mike --



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