density disk.

Once it is formatted, you can copy programs and information onto the disk. This isn't done on an ad-hoc or straightforward basis. Everything is kept in files and controlled by the disk operating system (DOS). This keeps a list of the files on the disk in a directory and then uses any convenient unused sectors to store the information. Physically, a file can be split up all over the disk and the DOS will also keep an index of which sectors a file uses, leaving markers in each sector as to where the next part of the file can be found. This is a bit like taking a pile of ruled pieces of paper and adding the ingredients of a book — a contents page, an index and page numbers.

Until very recently, disk formatting has been a very complex and non-standard area fraught with incompatibilities. The ability to take a disk from one machine and use it in another depends on two things: how the disk is formatted and how files are arranged on it. Fortunately, many micros now use the same disk formatting or at least have special utility programs that can read and write alien formats. And many machines use standard operating systems such as CP/M (Control Program Microprocessors) and MS – DOS (Microsoft Disk Operating System), so files are arranged the same way.

Tracks And Sectors
Data is written on the disk in concentric tracks. Each track is divided into sectors. A sector contains a block of the user's data, and to this block the DOS automatically attaches the error-checking and identification data necessary for file and record management
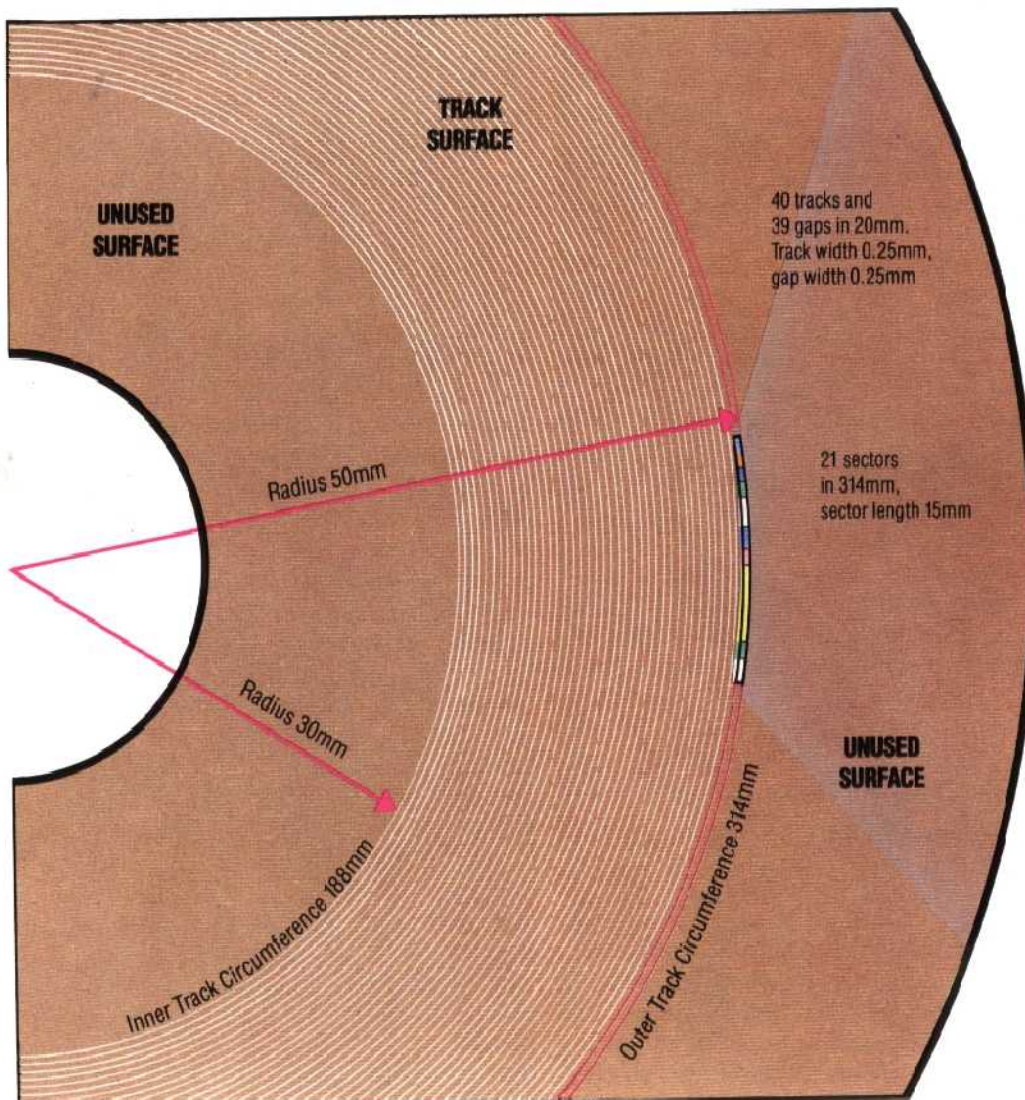
SECTOR HEADER

Synch Signal 1
Enables reading speed of disk head to match rotational speed

Track Number
Identifies current track

Sector Number
Identifies current sector

Checksum 1
Provides error-check of header data

Gap 1
Separates sector header from data block

SECTOR DATA BLOCK

Synch Signal 2

File Link
Identifies next sector of current file

Data Block
128,256 or 512 bytes of user data, depending on the disk operating system

Checksum 2
Provides error-check of user data

Gap 2
Separates this sector from next

UNUSED SURFACE

TRACK SURFACE

40 tracks and 39 gaps in 20mm. Track width 0.25mm, gap width 0.25mm

21 sectors in 314mm, sector length 15mm

UNUSED SURFACE

Radius 50mm

Radius 30mm

Inner Track Circumference 188mm

Outer Track Circumference 314mm