What is the Product?

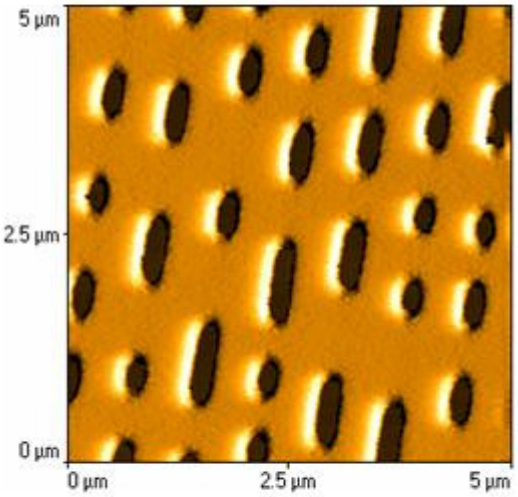
CD versus DVD technology

What is it used for?

Entertainment and data storage

What's nano about it?

- The distance between the circular tracks* of information on a CD is 1.6 microns.
- The distance between the circular tracks of information on a DVD is 740 nanometers.
- The information on a CD could be straightened out into a line that is over 3 miles long.
- The information on a DVD could be straightened out into a line that is 7.5 miles long.
- The bumps that make up the information on a CD are 0.5 micrometers wide.
- The bumps that make up the information on a DVD are 320 nanometers wide.



Atomic Force Microscope Image of a DVD surface

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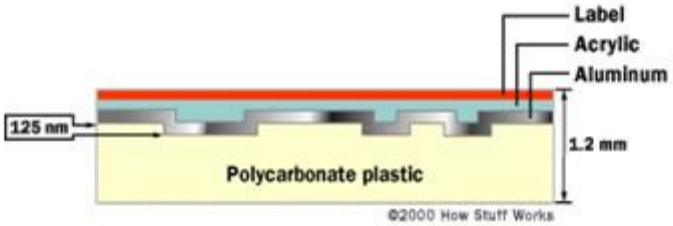
How does it work?

- By making the distance between the tracks smaller you can squeeze the lines of information closer together and therefore put more information in the same disk size.



Does it have other applications?

- Making features smaller allows you to put more in a given space.
- This increases the functionality per square centimeter of the disk or another device.

Glossary:

- **Tracks** (n) – The path that the divots follow around the disk that the laser traces.

This information was obtained from:

- Howstuffworks.com
- The Center for Nanotechnology Education and Utilization
- Definitions were obtained from Dictionary.com

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