



# Hard Drives: It's all about Capacity

Dave Anderson,  
Director, Strategic Planning  
Seagate Technology



## Drive Capacity Today: New Products in 2006

Product Name	Application	Disc Diameter (in.)	Disc Capacity (GB)	Drive Capacity (GB)
ST1.3	Handheld	1	12	12
Barracuda 7200.10	Consumer	3.5	187.5	750
Momentum 5400.3	Notebook	2.5	80	160
Cheetah 15K.5	Enterprise	3.5	75	300

# HDD Technology Trends

<b>3.5 inch Consumer</b>	<b>2006</b>	<b>2009</b>	<b>2013</b>
Drive Capacity (GB)	750	2,000	8,000
Number of Discs	4	3	3
Capacity (GB/disc)	187	670	2,670
Transfer Rate (Mb/sec)	930	2,000	5,000
RPM	7,200	7,200	10,000
<b>1.0 inch Handheld</b>	<b>2006</b>	<b>2009</b>	<b>2013</b>
Drive Capacity (GB)	12	30	100
Number of Discs	1	1	1
Capacity (GB/disc)	12	30	100
Transfer Rate (Mb/sec)	145	200	600
RPM	3,600	4,200	5,400

- By comparison: The world of a 4 GB HDD:
  - 1996/1997
  - Windows 3.1 going to Windows 95
  - Dial-up internet

## Summary

- Choosing magnetic hard drives reflect a need for storage capacity
  - Hard Drives deliver the most cost effective capacity
  - Drives have a threshold capacity, below which magnetic storage less cost effective
  - Drive capacity will continue to increase to reflect the growing need for storage
  
- Drives will incorporate flash memory as an option (Hybrid drives)