Hard drive price trends

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The Data

• Hard disk price data from www.pricewatch.com
• 319 measurements over 1955 days
  – Started Jan 13, 2003
  – Entire history of SATA drives represented
• Cheapest “street price” for each size drive recorded
  – Some promotional deals (often 1 per customer)
  – Data not guaranteed accurate
Price evolution for 250GB drives

Figure by J. Romney
Price evolution for 500GB drives

Figure by J. Romney
PATA and SATA: $/GiB vs. Time

- SATA Drives
- PATA Drives

- 2.28 yr price halving
- 1.42 yr price halving
Update to Alan's plot
Prediction for early 2011

- 3.2TB drives / 25.6TB modules will be largest available
  - 14.2 hours at 4096 Mbps
  - 4.5 modules needed for a 64 hour weekend!
- Price will be $280 per drive / $2740 per module
- 10 station, 30 day supply + 10% spares:
  - 560 modules = $1.5M
- Flash devices will just start becoming economical
  - Next generation recorder will be solid state!
There's been a lot of confusion over 1024 vs 1000, kbyte vs kbit, and the capitalization for each. Here, at last, is a single, definitive standard:

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>NAME</th>
<th>SIZE</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>kB</td>
<td>KILOBYTE</td>
<td>1024 BYTES or 1000 BYTES</td>
<td>1000 BYTES DURING LEAP YEARS, 1024 OTHERWISE</td>
</tr>
<tr>
<td>KB</td>
<td>KELLY-BOOTLE STANDARD UNIT</td>
<td>1012 BYTES</td>
<td>COMPROMISE BETWEEN 1000 AND 1024 BYTES</td>
</tr>
<tr>
<td>KiB</td>
<td>IMAGINARY KILOBYTE</td>
<td>1024.937528 BYTES</td>
<td>USED IN QUANTUM COMPUTING</td>
</tr>
<tr>
<td>kb</td>
<td>INTEL KILOBYTE</td>
<td>1023.937528 BYTES</td>
<td>CALCULATED ON PENTIUM FPU.</td>
</tr>
<tr>
<td>Kb</td>
<td>DRIVEMAKER'S KILOBYTE</td>
<td>CURRENTLY 908 BYTES</td>
<td>SHRINKS BY 4 BYTES EACH YEAR FOR MARKETING REASONS</td>
</tr>
<tr>
<td>KBa</td>
<td>BAKER'S KILOBYTE</td>
<td>1152 BYTES</td>
<td>9 BITS TO THE BYTE SINCE YOU'RE SUCH A GOOD CUSTOMER</td>
</tr>
</tbody>
</table>

From http://xkcd.com