



# The Web Within Us: When Minds and Machines Become One

TELECOSM 2009: Investment Israel  
November 11, 2009  
Ray Kurzweil



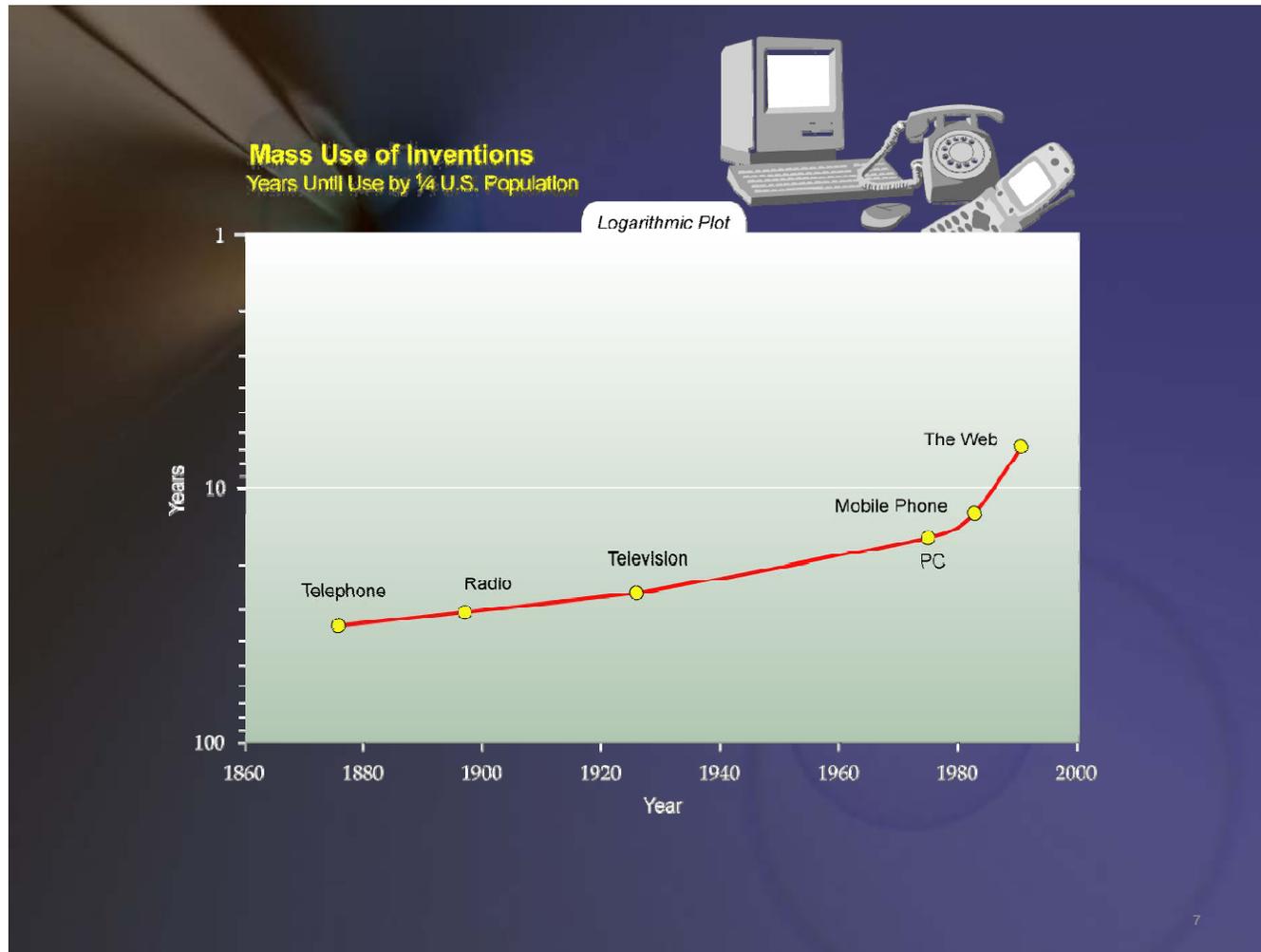
I have selected a set of charts from Mr. Kurzweil's presentation at George Gilder's Telecosm 2009 conference. Ray's data and views are always enlightening. I have edited his 122 page slide deck down to 28 and added some comments – Enjoy!  
Jeb B. Terry, Sr.     President, Aberdeen Investment Management

# The Law of Accelerating Returns

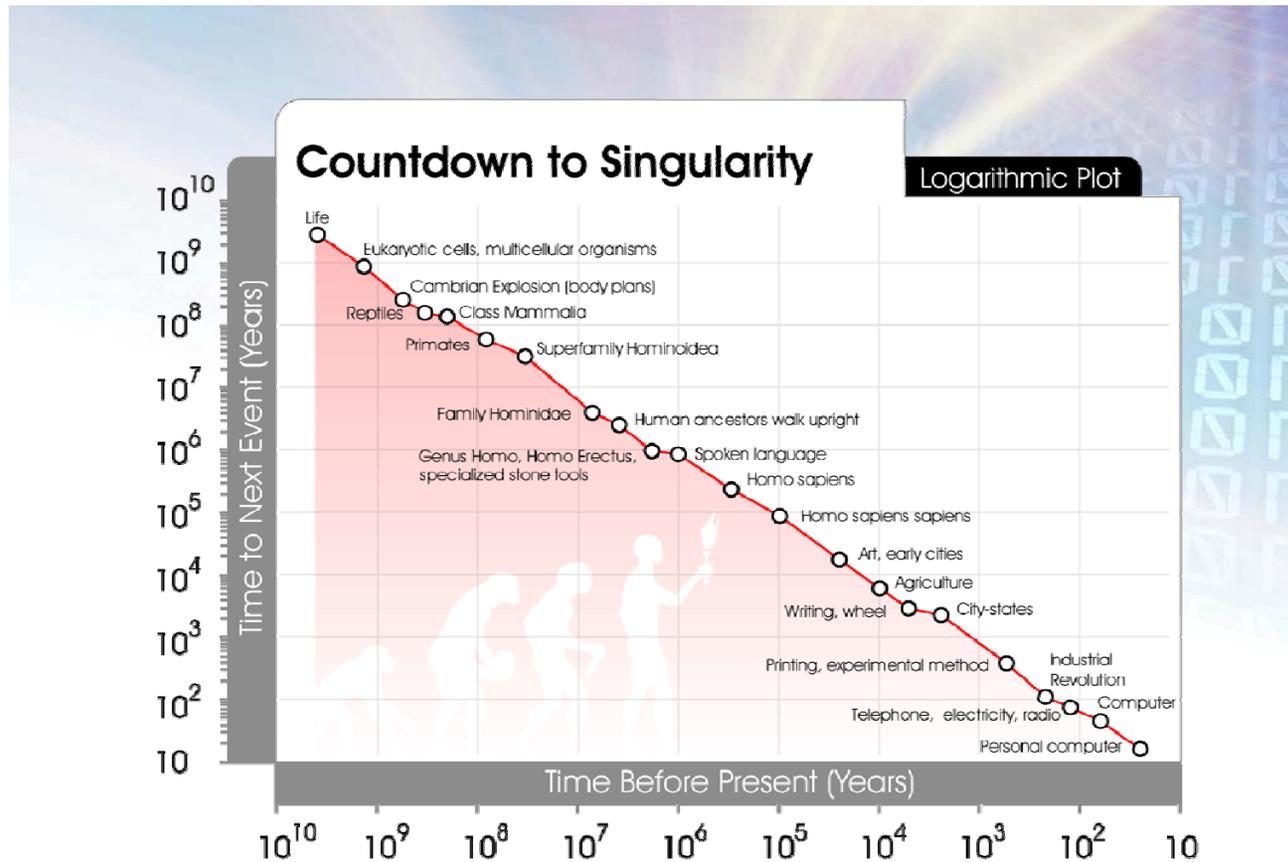
- The price-performance, capacity & bandwidth of information technologies progresses exponentially through multiple paradigm shifts
  - Specific to information technology
    - not to arbitrary exponential trends (like population)
    - Still need to test viability of the next paradigm
  - A scientific theory
    - 25 years of research
    - Part of a broader theory of evolution
    - Inventing: science and engineering
  - Moore's law just one example of many
  - Yes there are limits
    - But they're not very limiting
      - Based on the physics of computation and communication
      - and on working paradigms (such as nanotubes)

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JBT We target companies that benefit from this concept. Short term financial results often mask underlying positive developments.



JBT The adoption of the mobile phone and the web have been much faster than prior inventions. The merger of the mobile phone and the web in the form of smart phones (e.g. the iPhone) is being adopted at an even faster rate. 80% of the U.S. population now use mobile phones. 25% of mobile phone users will be using smart phones by the end of this year. That number will likely double in 2-3 years.



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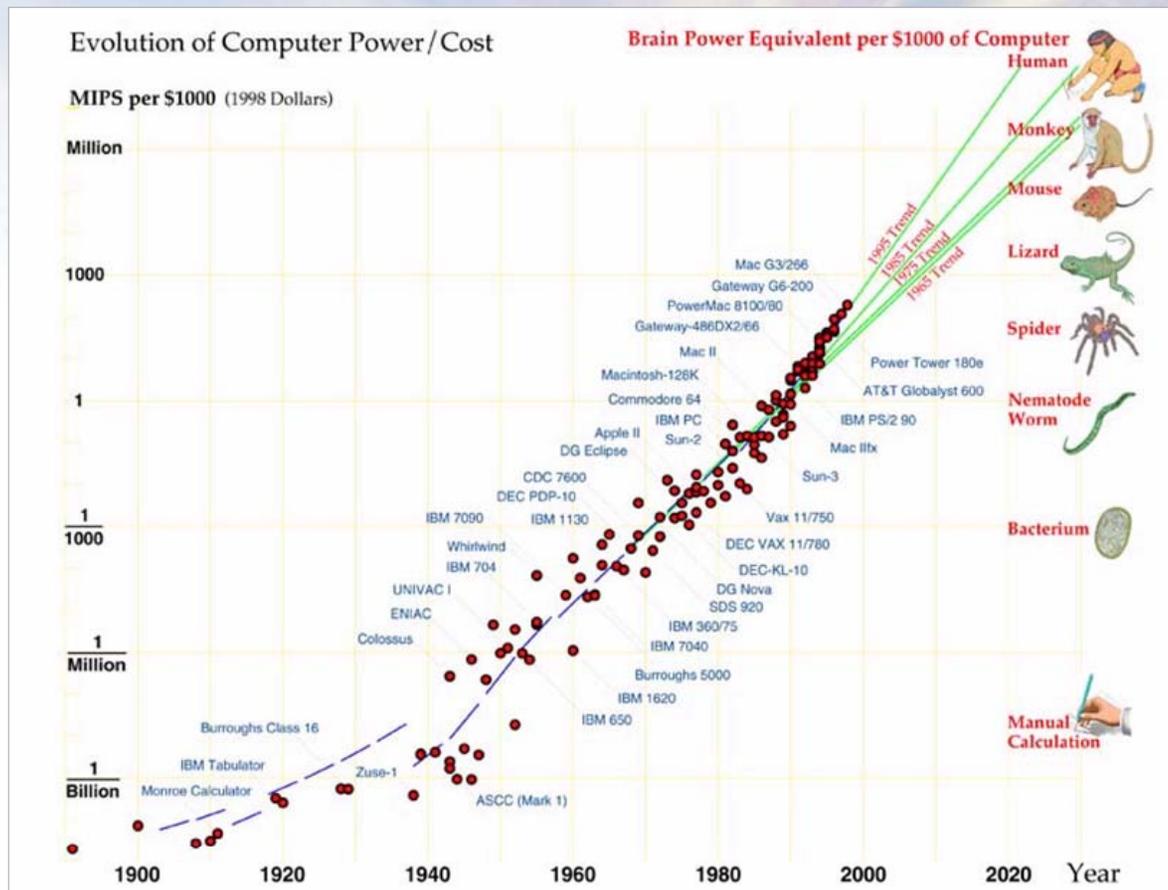
JBT “Singularity” is Ray’s term for the convergence of computing power with human thought processing ability. Remember that the scales are logarithmic. Time is compressing as development accelerates.



Information Technologies (of all kinds) double their power (price performance, capacity, bandwidth) every year

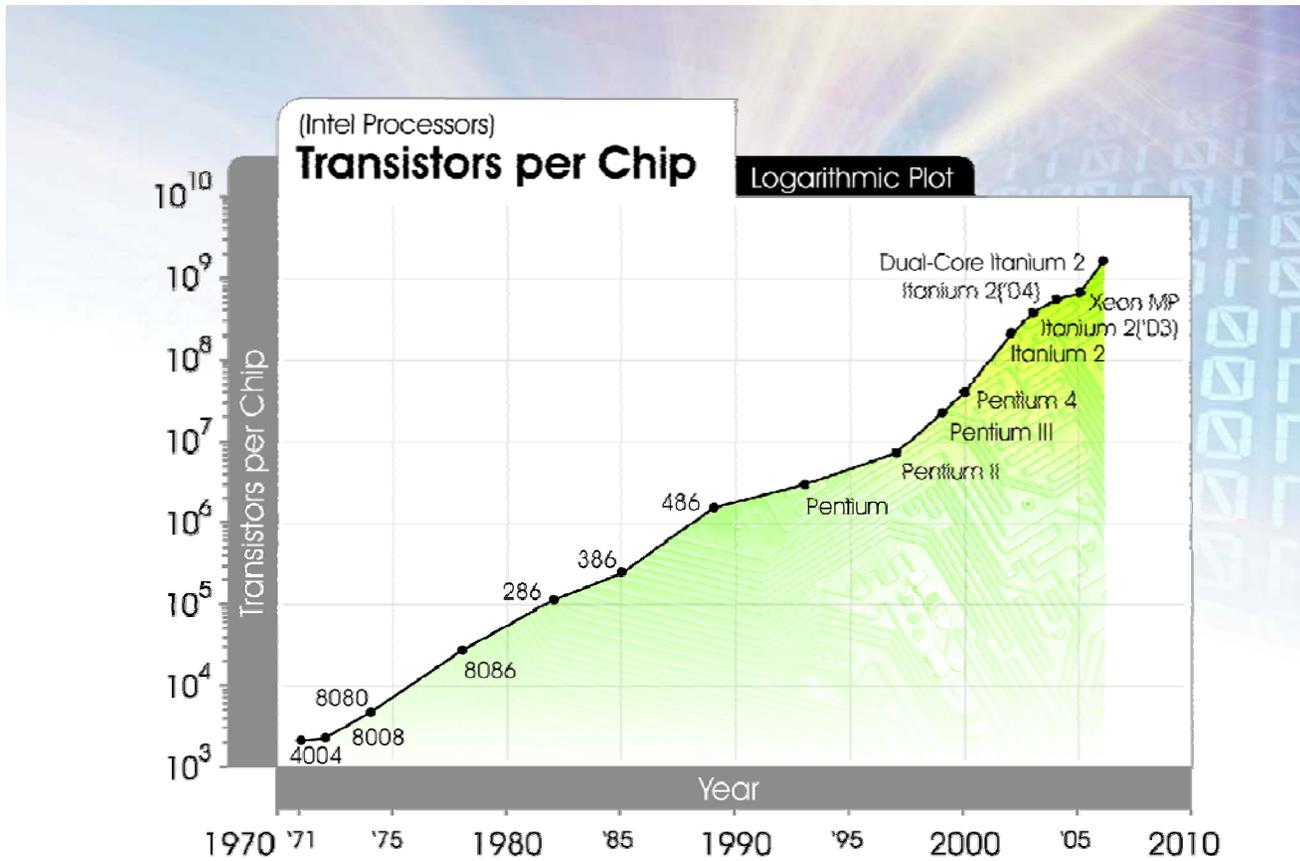
15

JBT This is one of our core assumptions. This provides our companies with a sustained bias toward lower cost structures . . . a strong wind at their back.



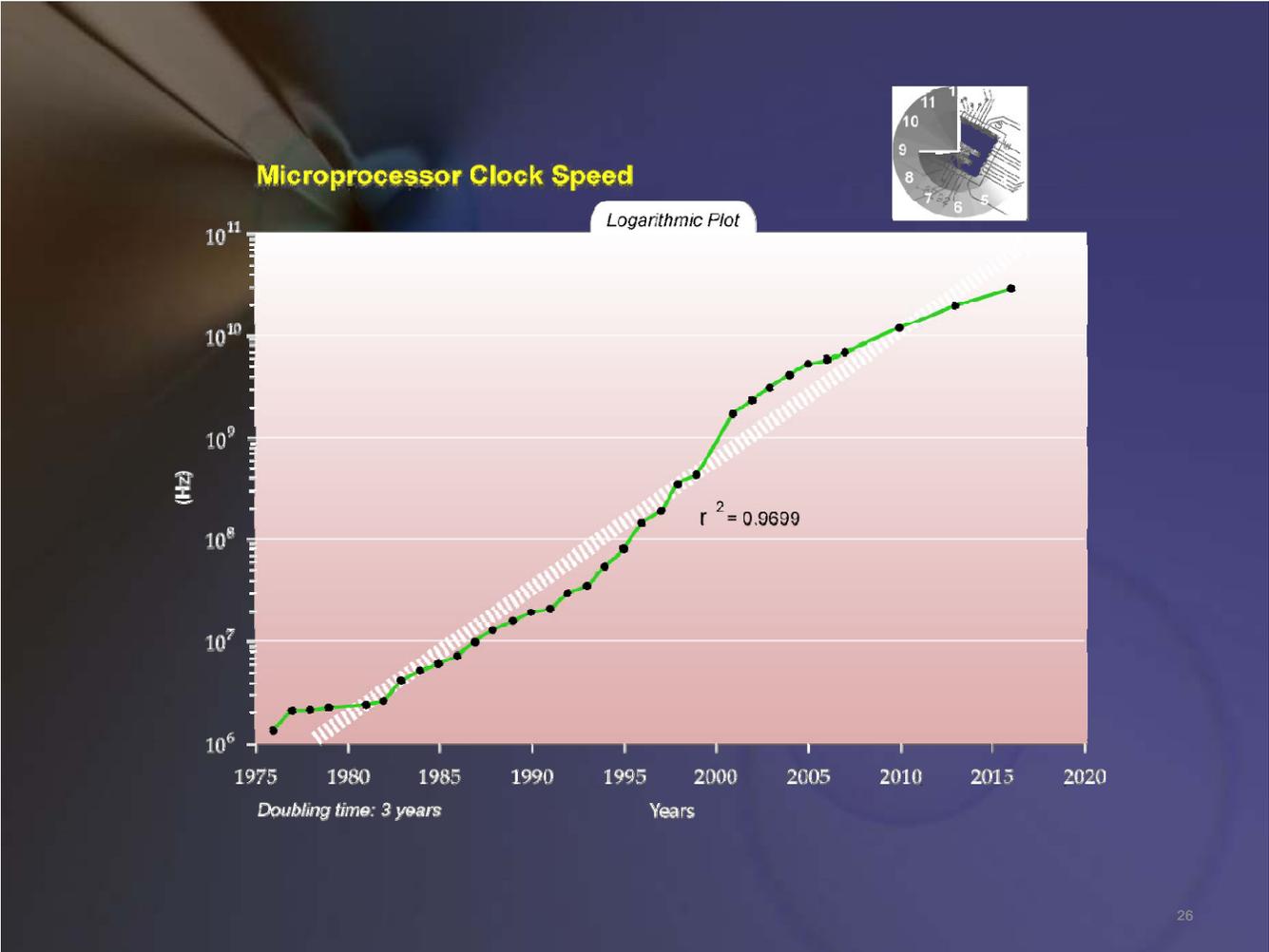
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JBT Ray points out that unlike most log scale displays, this line is actually curving upward meaning there is accelerating, non-linear, advancement in computing power that has not been stunted by the recession . . . Better, faster, cheaper – Eh?

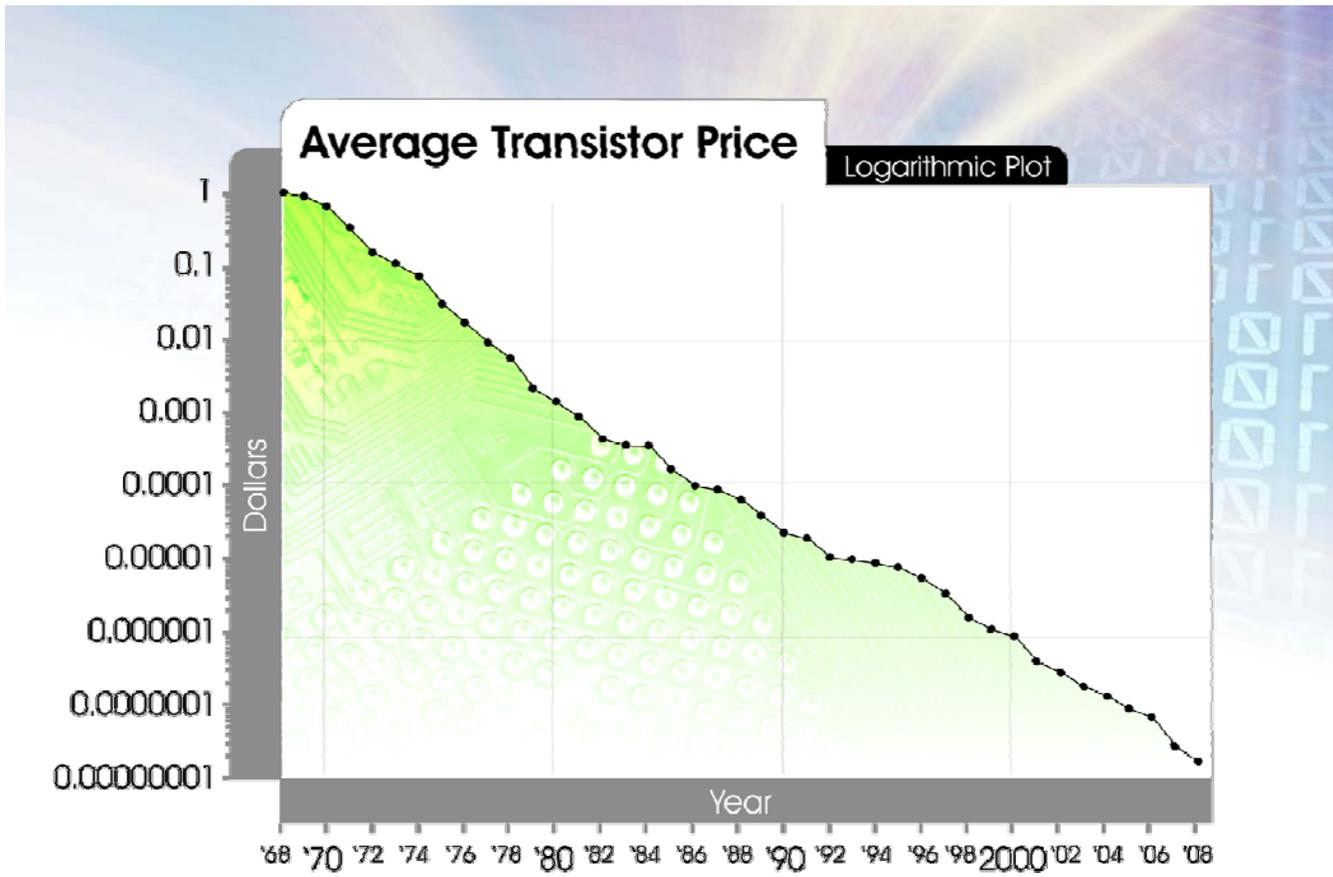


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JBT \* BETTER \* Putting more computing power on ever smaller chips that run cooler and with less energy . . . et voila . . . the super smart phone and a myriad of smart, wireless sensors.

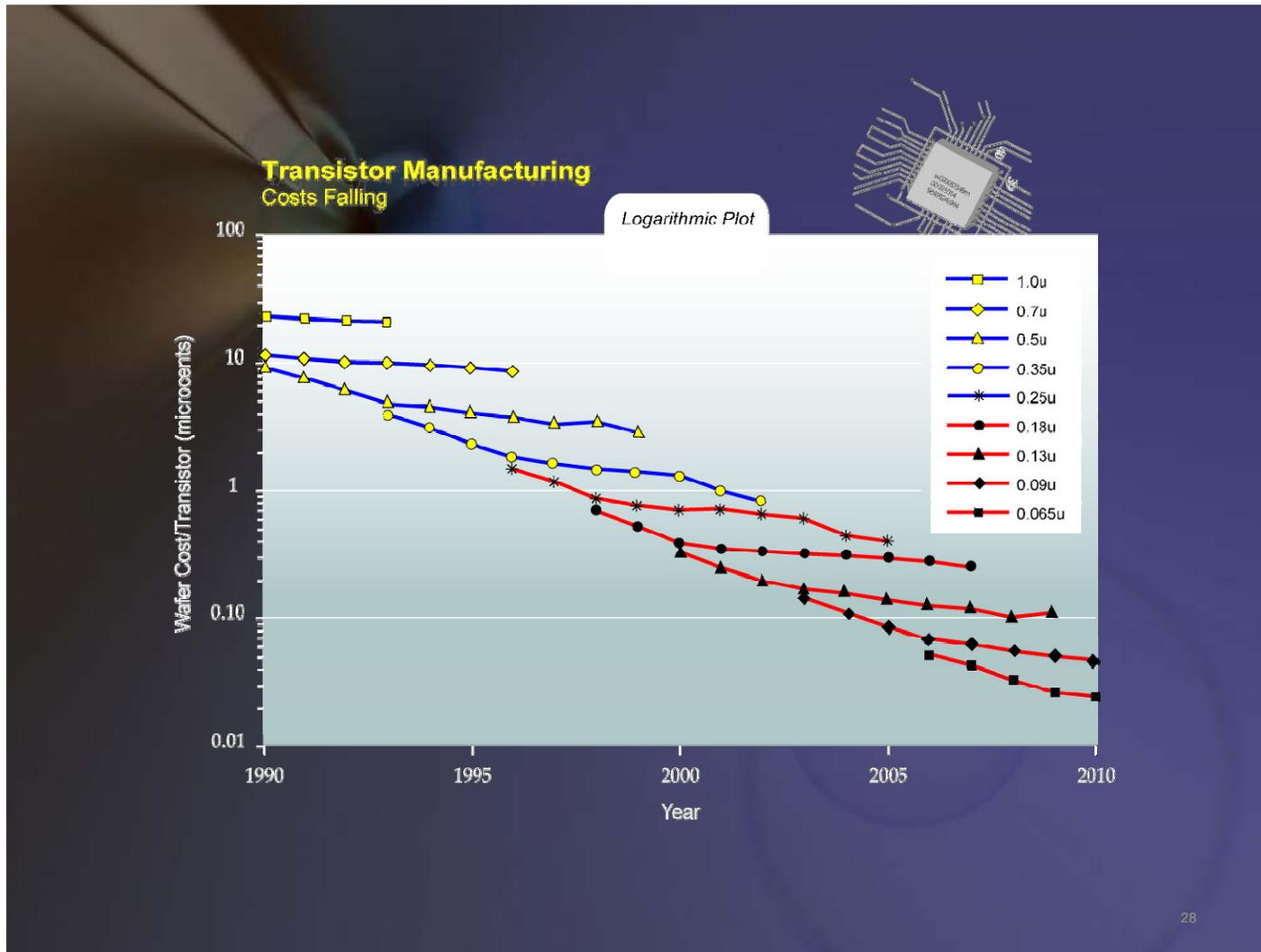


JBT \* FASTER \*



25

JBT \* CHEAPER \*



JBT \* CHEAPER \* In fact over 90% cheaper just since 2000!