



Flash Memory Summit

Next Great Breakthrough in Flash

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Disclaimer

- **Views expressed are my own:**
 - Not necessarily shared with my employer: Toshiba Memory America
 - Not to be construed as product roadmap or product commitment
- **Forward looking statements on technology may be wrong:**

“Spam will be a thing of the past in two years’ time.”

 - Bill Gates, 2004
- **Forward looking statements on technology may be right:**

“Computers in the future may weigh no more than 1.5 tons.”

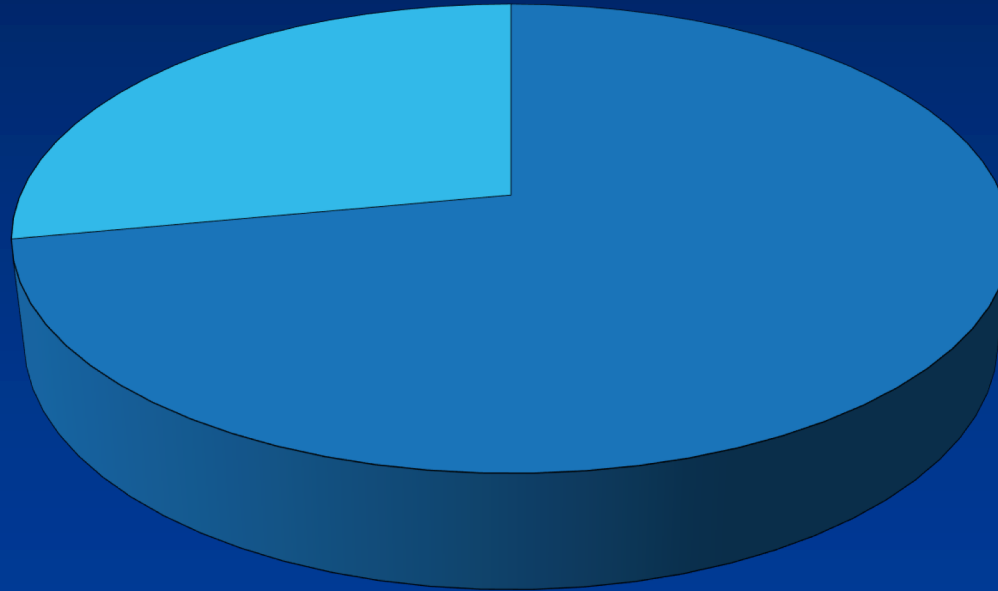
 - Popular Mechanics, 1949



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Storage has moved to the cloud...

NVMe™ SSD shipments (units or capacity...)



□ Hyperscale □ Everyone else



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Questions to Industry:

- **Why does practically every hyperscaler also have an “in house” SSD design/build program?**
- **Will the requirements of the hyperscalers drive the creation of new types of SSDs?**
- **Will the “Next Great Breakthrough in Flash” be new ways of interacting with Flash and new functionality tailored to the needs of the hyperscalers?**