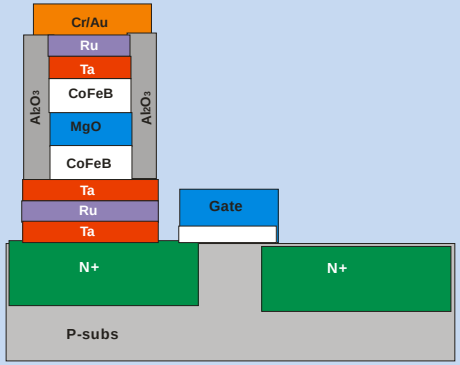
STT- RAM
A PARADIGM SHIFT IN MEMORY, SYSTEM ARCHITECTURE AND STORAGE?



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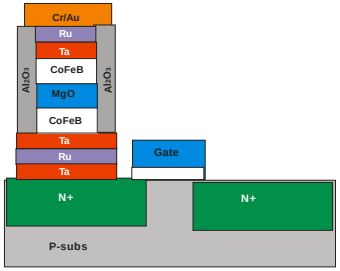
Flash Memory Summit 2014
Santa Clara Conv. Center
Aug. 5-7, 2014



STT RAM TRENDS IN MEMORY AND STORAGE

- LOCATE MEMORY IMMEDIATELY ADJACENT TO CPU, MINIMIZES DELAY
- PROCESS COMPATIBILITY: MEMORY AND LOGIC
- ENDURANCE, TECHNOLOGY PERFORMANCE, COST
- MINIMIZE REFRESH POWER (NVM)
- SYSTEM COMPATIBILITY
- MAG STACK/HIGH VOLUME/LARGE SILICON WAFER

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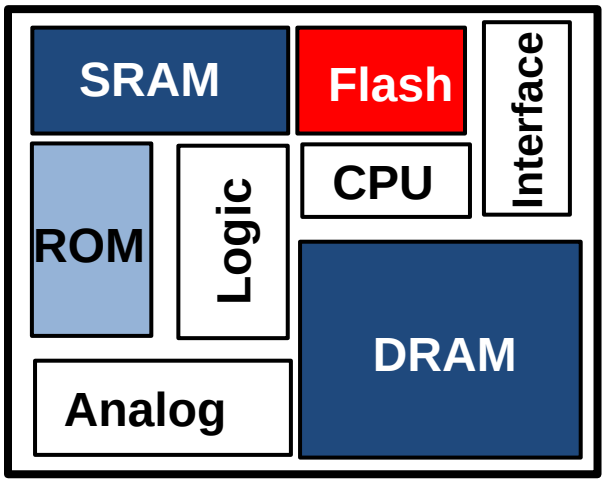
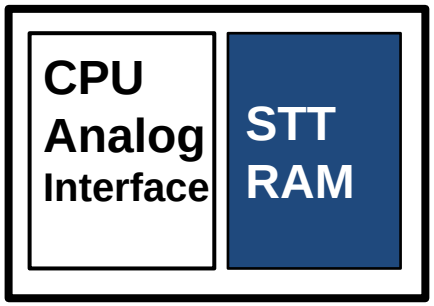
STT RAM Embedded Memory

45% Chip Size Saving

SOC With Multiple Memories

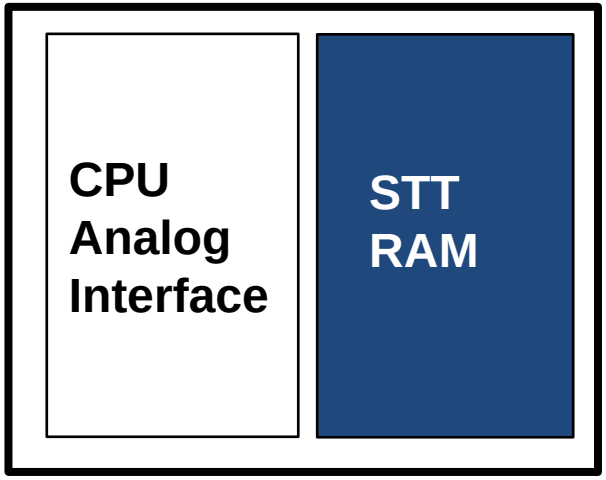


1.0 X



0.55X

1.5-2.0 X Functionality



1.0 X

Based On Rajiv Ranjan (Avalanche Technology)

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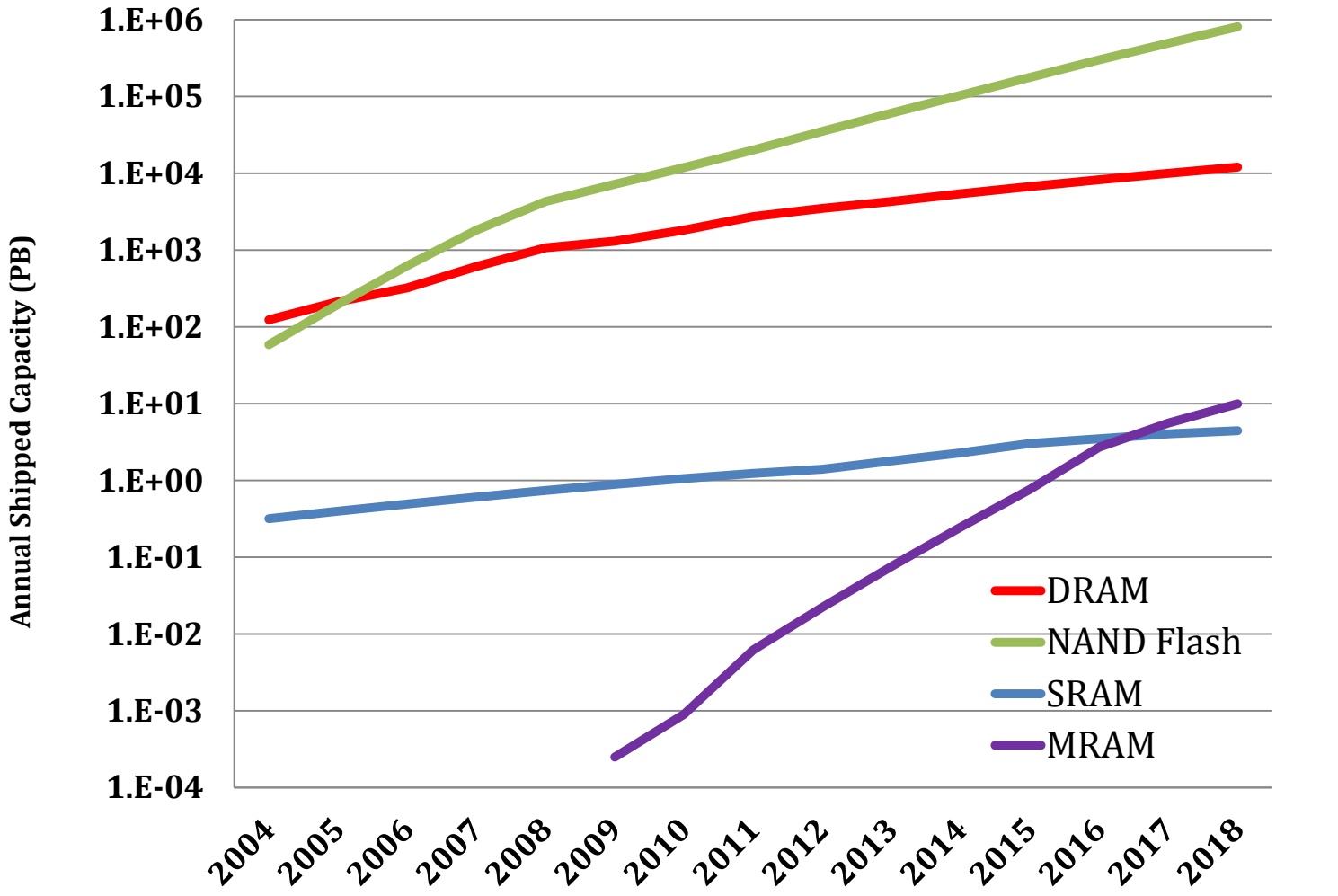
ANNUAL PETABYTE SHIPMENTS FOR MEMORY TECHNOLOGIES



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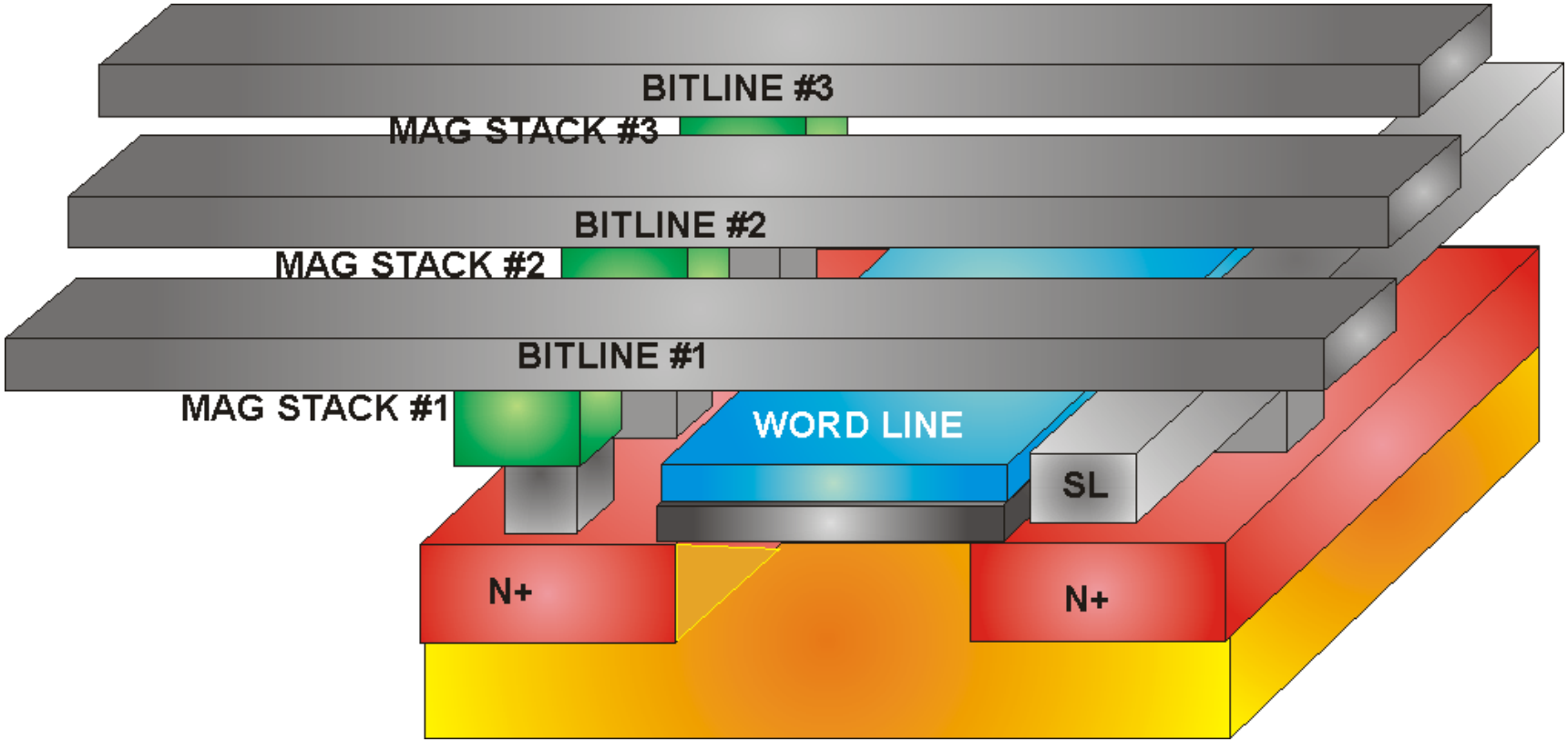
MULTI STACK (MULTIBIT CELL) STT RAM
A FUTURE STORAGE TECHNOLOGY?



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