Life on the Bleeding Edge

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CENTER FOR NON-LINEAR STUDIES
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BAD

GOOD
• 128 Pentium II 333Mhz CPUs arranged as 64 SMP nodes
• Myrinet high-speed interconnect
• 1/2 Terabyte RAID disk farm
• 32 Gigabytes RAM
• 320 Gigabyte local scratch disk
BLEEDING EDGE, LITERALLY

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• Myrinet high-speed interconnect
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LANL NIRVANA AND BLUE MOUNTAIN - SGI ORIGIN 2000
SCARY PROBLEMS

Intermittent wrong answers
File systems with corrupted data
ARGONNE BGL – IBM BLUEGENE/L
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ALCF INTREPID – IBM BLUEGENE/P
ALCF INTREPID – IBM BLUEGENE/P
ALCF MIRA – IBM BLUEGENE/Q
ARGONNE AURORA – FUTURE EXASCALE SYSTEM

- Over 1000 PF peak
- Delivery in 2021
- Supports Data, Learning, and Simulation
- New architecture
  - Some guidelines are available on the Early Science Program site:

This costs a whole lot less when it happens inside our computer.
Thank You