

# Advanced Computation Building



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## History

- **ACB - Constructed in 1970 to house Illiac IV Supercomputer.**
  - **Never housed the Illiac IV due to Vietnam War protestors.**
  - **Second and Third floor machine rooms totaling 9,240 sq. ft.**
  - **1985 - Cray X-MP/24 installed in second floor machine room.**

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## COOLING/POWER SPECIFICATIONS OF EXISTING BUILDING

- 280 TONS OF COOLING FOR SECOND AND THIRD FLOOR MACHINE ROOMS.
- FOUR MEGAWATTS OF POWER
- TWO POWER SOURCES - CAMPUS/ILLINOIS POWER
- CONFIGURED FOR LIQUID COOLED MACHINES

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## CURRENT HPC EQUIPMENT

- OVER 1600 ORIGIN 2000 PROCESSORS
- 1024 PROCESSOR LINUX CLUSTER
  - ADIC TAPE LIBRARY
  - STORAGETEK TAPE SILO
- MISC. CLUSTERS AND MACHINES

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## WISH LIST FOR NEW ADDITION

- WIDE OPEN SPACE WITHOUT COLUMNS
- ENOUGH COOLING TO HANDLE LARGE CLUSTERS
  - FREIGHT ELEVATOR
- CABLE MANGEMENT UNDER FLOOR
  - BACKUP POWER

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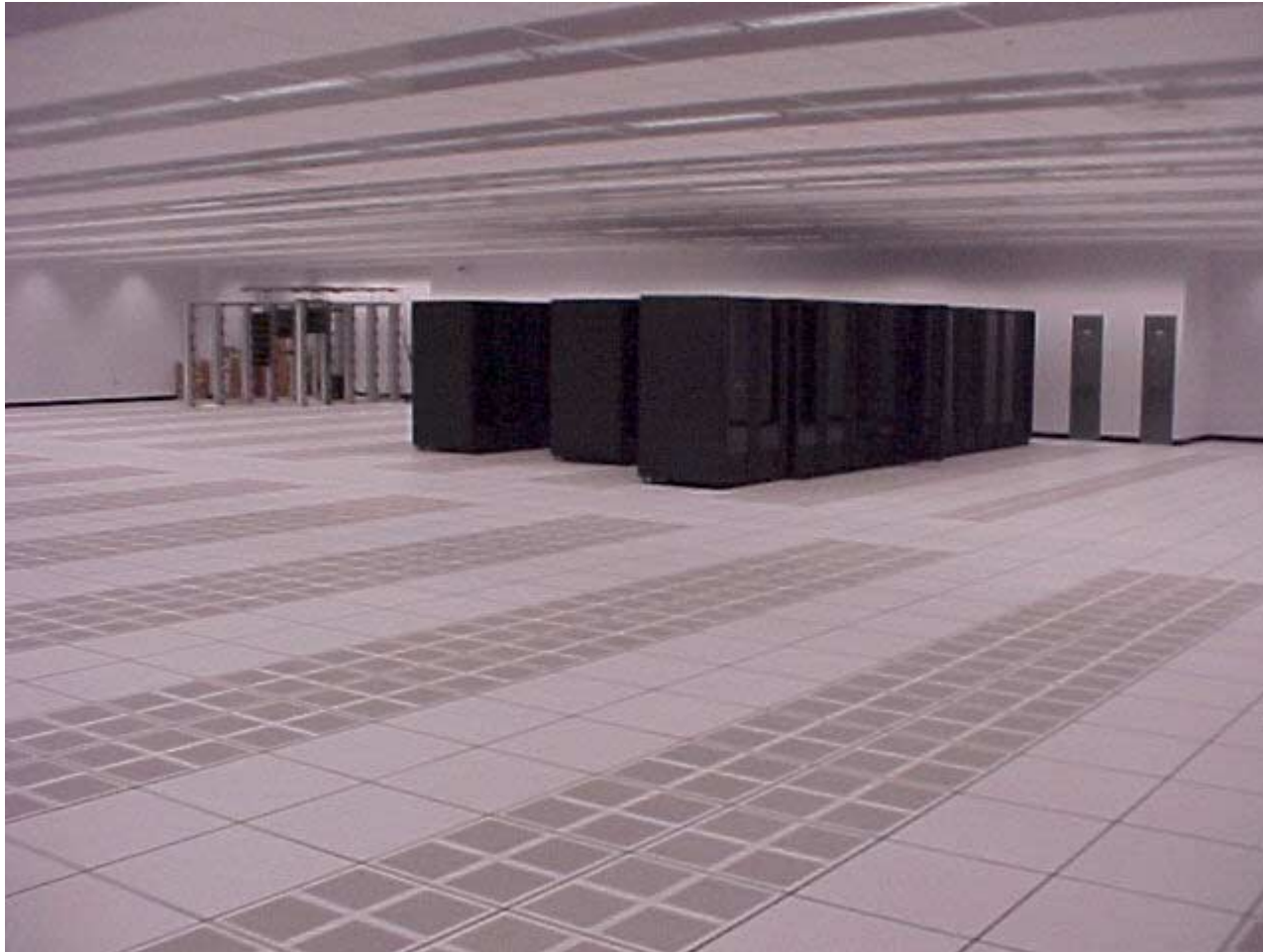
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- WIDE OPEN SPACE WITHOUT COLUMNS



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## OUTSIDE OF AIRHANDLER UNIT



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## WALL OF FILTERS



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**55,000 CFM BLOWERS**



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**COILS, COILS, COILS**



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**AIR MOVES THROUGH LOUVERS TO RAISED FLOOR.**



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## LOUVERS UNDER RAISED FLOOR



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**2200 FLOOR POSTS UNDER RAISED FLOOR**



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## CABLE MANAGEMENT MADE EASY





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## NETWORKING TRAY AND FIRE DETECTION



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## GOING DOWN UNDER



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## ACCOMPLISHED GOALS

- 7500 SQUARE FEET OF MACHINE ROOM
- 1 TON OF COOLING FOR EVERY 10 SQ. FT
- FREIGHT ELEVATOR ACCESS TO ALL FLOORS
  - 2. 5 MEGAWATTS OF POWER
    - 125 KVA LIEBERT UPS
- DIESEL GENERATOR EMERGENCY POWER

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**COMPLETED, READY FOR PHASE TWO**

