

### HARDWARE SELECTION

- Normally Computer Hardware is purchased on recommendation
- This is because people with purchase authority know less about hardware requirements.
  - · They don't know size requirement
  - They don't know capacity needs
  - · They don't have a comparison scheme
  - They want a good bye in reasonable budget
  - They have faith in the recommender

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### SIZE AND CAPACITY REQ?

### Features of size and capacity

- Internal Memory size
- Cycle Speed of System
- Number of Communication Channels
- Type of Display
- Type and capacity of Auxiliary Storage



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#### SOFTWARE DICTATES HARDWARE

- Commonly Software dictates minimum hardware configuration.
- Software features dictate additional hardware peripherals (scanner, webcam, tablet)
- Software's connectivity requirements decide requirements for networking components
- Storage needs determine disk configurations
- Backup features specify tape/DVD-R/etc.

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#### COMP. EVAL AND MEASUREMENT

- Comparisons between competing HW platforms are made on the basis of performance data.
- · This process needs benchmarking.

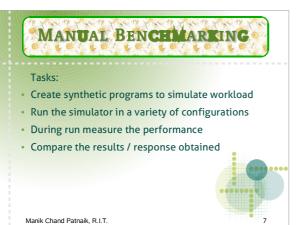


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# AUTOMATIC BENCHMARKING

- This is the process of emulating actual processing workload by using artificial workload generated by automatic programs executing a predefined set of jobs on demand.
- During the execution of the jobs performance measurement is done.
- This measured data is compared with previously measured data from similar systems.
- Eg: CPU mark, 3d mark, cpumark, passmark etc.

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# PLUG COMPATIBLE?

- Equipment which can replace the original vendor supplied parts are known as plug compatible equipment.
- Reason: Cost factors e.g.(Canon Color Cartridge 850/-, Compatible Cartridge 400/-)
- Some Common plug compatible equipments:-
  - Printer
  - Hard disk
  - Memory
- Optical drives Manik Chand Patnaik, R.I.T.



How to Acquire HW? The financial Factors: Rental Lease Purchase

# RENTAL - MERITS Short term usage (1-12 months)

- · Flexibility in payment
- Cancellation with 1 or 2 month notice from both
- · Purchase decision can be delayed by using rental
- · Good for pilot projects / evaluation tasks
- · Quick deployment and flexible hardware usage

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RENTAL - LIMITATIONS

- · High cost per day usage
- Volatile rentals

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- · No tax benefits for depreciation
- · Equipment condition is questionable
- · Short notice cancellation can be damaging
- Only for stop gap arrangements and short term solutions.

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# LEASE - BENEFITS

- Term ranges from 3 to 7 years
- · Predetermined payments. Rentals not volatile.
- · Less expensive than rental
- No technical obsolescence
- No capital investment
- Some tax advantages
- · Lease and own schemes



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# LEASING - LIMITATIONS

- Legal issues (Read the fine-print before you sign)
- · Less than rental but still the charges are high.
- Lessor gets depreciation benefits and lease amount both
- Premature termination causes litigation / huge fines.

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### PURCHASE - MERITS

- Quite popular due to dropping prices and increasing rentals
- Long term use
- Depreciation / Ownership benefits from tax
- Attractive purchase schemes, loan schemes
- · Maintenance charges are tax deductible
- Taxes on purchases are tax deductible



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### PURCHASE - LIMITATIONS

- Technological Obsolescence
- Burden of ownership



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### PURCHASE MAINTENANCE?

- Free Warranty Period is not for infinity!!!
- Vendor Service contracts
- Annual Maintenance contracts from 3<sup>rd</sup> party
- In-house Maintenance
- Maintenance needs budgeting too!



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# SOFTWARE SELECTION

- This selection comes prior to the selection of Hardware.
- Further, most software selection will depend on the type of application / project.
- Some standard items like Operating System are selected on the basis of organization's policy.
- Acquisition of Software Libraries require technical insight into the working aspects of them.

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### SOFTWARE EVALUATION >

- Alternative software is evaluated depending on the Application Requirements:-
  - Transaction types
  - Report types
  - File types / Database usage
  - Volume of storage
  - etc.



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