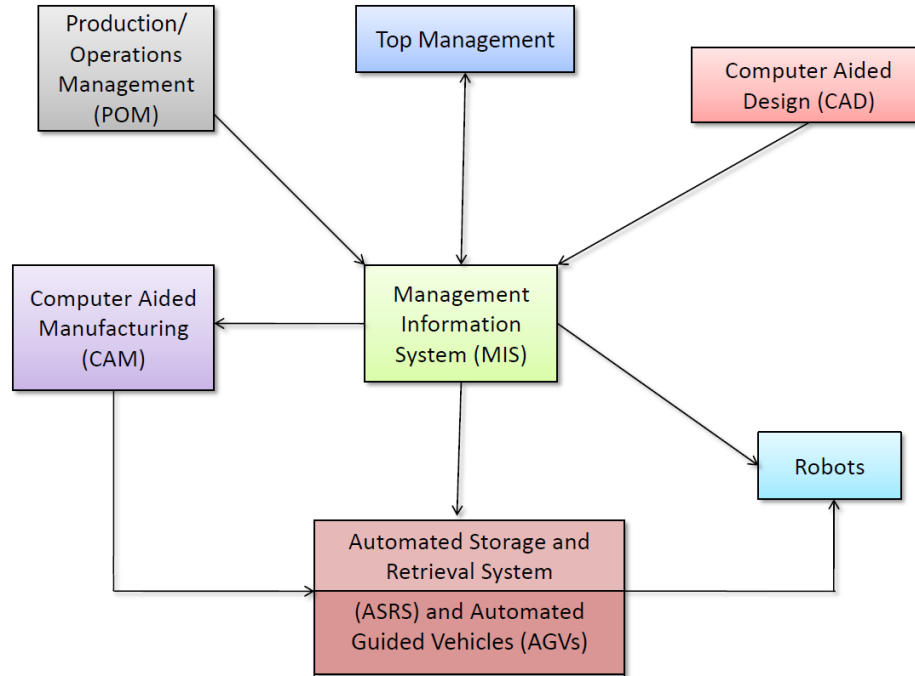


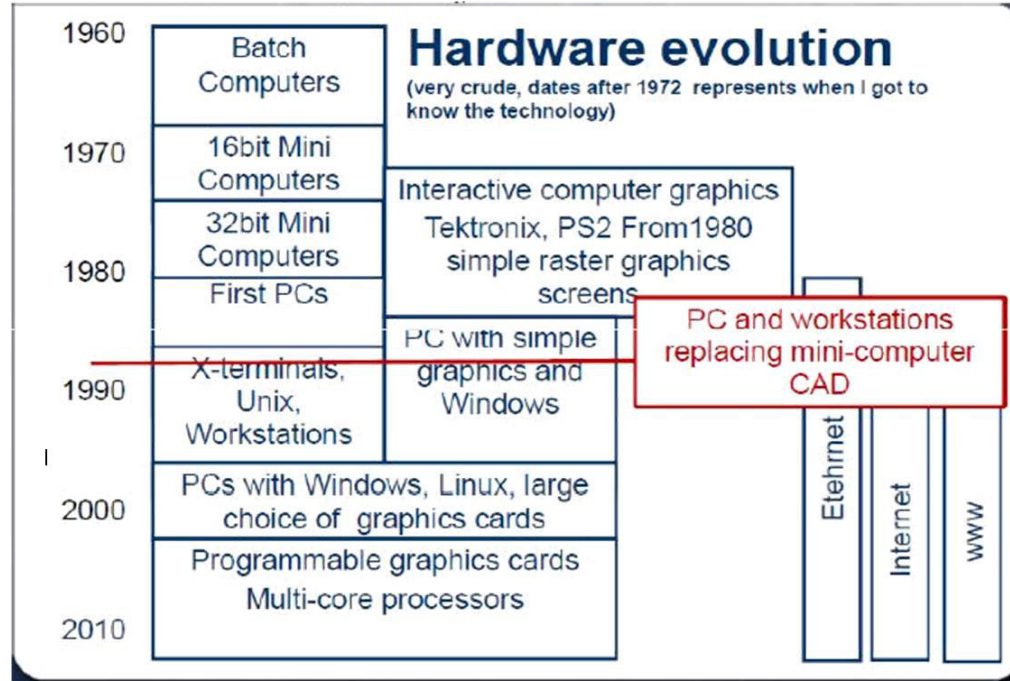
MIS



Questions

1. Mention any four applications of computer aided design in Mechanical Engineering.
2. Define CIM
3. Define Computer-aided engineering (CAE) and Finite element analysis (FEA)
4. List the various stages in the life cycle of a product
5. Define Clipping.
6. What is viewing transformations?

Lecture No 6 Topic: History of CAD and Introduction of Computer Graphics



History of CAD

A brief history of the evolution of CAD/CAM, according to the decade and the major CAD/CAM developments, is outlined below.

1950s: Start of interactive computer graphics,
CRT (Cathode Ray Tube), NC (Numerical Control),
APT (Automatically Programmed Tools)

1960's

- Development in Interactive computer graphics research
- Sketchpad system developed by Ivan Sutherland in 1962
- CAD term coined
- First major commercial CAD/CAM software available: CADAM by Lockheed, in 1965
- Bell Telephone's - Graphics 1 remote display system developed

1970's

- Potential of interactive computer graphics was realized by industry,
- Application of CAM in government, industry and academia
- Beginning of usage of computer graphics

History of CAD

- Initial Graphics Exchange Specification (IGES),
- Turnkey system available for drafting
- Wireframe and surface modeling software became available
- Mass property calculation and FEA software became available
- NC tape generating, verification, and integrated circuit software became available

National organization formed
Special Interest Group on GRAPHic (SIGGRAPH),
National Computer Graphics Association (NCGA),

1980's

- CAD/CAM used for engineering research and development
- New CAD/CAM theories and algorithms developed
- Integration of CAD/CAM
- Solid modeling software became available
- Use of PCs and workstation began