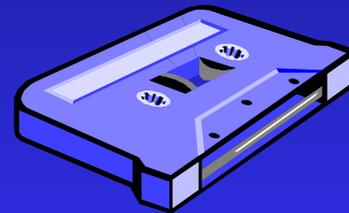


State of the Art
of
Aviation Training
SATS Planning Conference
15 July, 1999

Historical Perspective

- Based on age old technologies
- Classroom
 - ◆ Manuals
 - ◆ Video clips
 - ◆ Cassette tapes
 - ◆ 30/40 year old learning theories
 - ◆ Limited support materials



Historical

- Simulation
 - ◆ GAT link
 - ◆ Desk top trainers
- Aircraft
 - ◆ Technology base 30 – 40 years old
 - ◆ Avionics
 - ◆ Radios
 - ◆ Navigation



Historical

- Instructional systems
 - ◆ Requirements are hours based
 - ◆ Limited support
 - ◆ Human factors / ADM / CRM ?



Current State (Normal)

- Classroom materials
 - ◆ Paper
 - ◆ Video tapes
 - ◆ Presentation materials
 - ◆ Electronic slides
 - ◆ Overheads
 - ◆ Support materials available

Current State (Normal)

- Simulation

- ◆ Flight training devices

- ◆ Expensive

- ◆ PCATDs

- ◆ Low cost alternative



Current State (Normal)

■ Airplane

- ◆ Technology base 30 – 40 years old
- ◆ Avionics
 - ◆ Radios
 - ◆ Navigation
 - Two VOR's, ADF
 - ◆ Limited auto-pilot

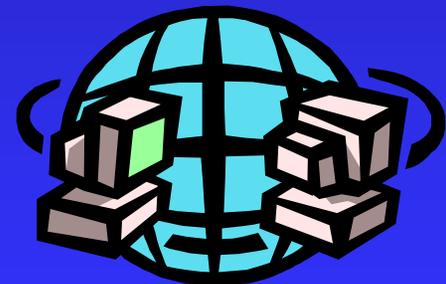
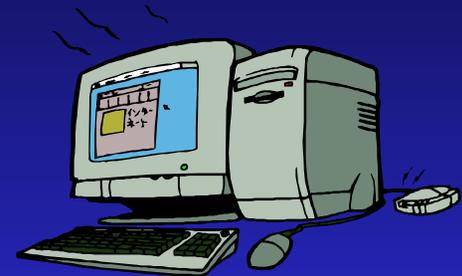


Current State (Normal)

- Instructional systems
 - ◆ Requirements are hours based
 - ◆ Limited support
 - ◆ NAFI and supporting organizations
 - ◆ Limited human factors / ADM / CRM

“State of the Art” - AGATE

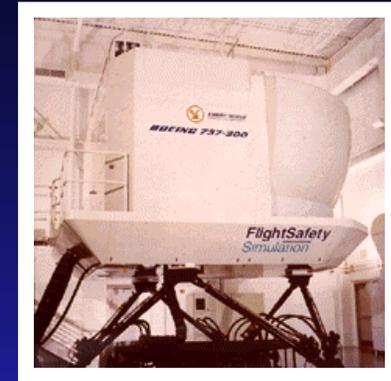
- Classroom
 - ◆ Computer based
 - ◆ Multi-media CBT
 - ◆ Test preparation
 - ◆ Electronic presentations
 - ◆ Web-based
 - ◆ Multiple support systems



“State of the Art”

■ Simulation

- ◆ Flight training devices
- ◆ Flight simulation
- ◆ PCATDs
 - ◆ Instructional
 - ◆ Debriefing tools



“State of the Art”



■ Airplane

- ◆ Technology base 30 – 40 years old
- ◆ Avionics
 - ◆ Radios
 - ◆ Simplified navigation
 - Global positioning system
 - ◆ Auto-flight

“State of the Art”



- Instructional systems
 - ◆ Requirements are hours proficiency based
 - ◆ Instructional support provided
 - ◆ Institutional training
 - ◆ NAFI and supporting organizations
 - ◆ Modern learning theories
 - ◆ Human factors
 - ◆ ADM / CRM an integral element

SATS Issues

- Vehicle technologies
 - ◆ HITS
 - ◆ Embedded training systems
 - ◆ Fliers education
 - ◆ Web-based training
 - ◆ Low cost integrated curriculum
 - ◆ 50 - 75% lower than today!!!

SATS Issues

■ Infrastructure

- ◆ Free flight
- ◆ Data link
- ◆ Smart airports
 - ◆ Seamless movement
- ◆ Flight Information Service
- ◆ Traffic Information Service