

NextGen Homework

1) Dr Felder described 4 characteristics with the existing Air Traffic Control System:

- 1) Massive, aging infrastructure _____
- 2) Independent surveillance _____
- 3) Ground-based Nav aids _____, _____
- 4) Voice communication _____, _____, _____

Match the problem (below) to the characteristic (above). More than one problem may apply

- A) Slow response times to ATC instructions
- B) Inefficient (non-direct) routes
- C) Only supports simple ATC instructions
- D) Growing maintenance costs
- E) Subject to human (hearing and interpreting) errors
- F) Lower accuracy than space-based/interrogation technologies

2) Dr Felder described 5 concepts/technologies that will overcome these problems. List the problems from #1, overcome by each concept/technology. More than one may apply.

- Required Navigational Performance _____
- Dependent Surveillance _____
- Digital Communications _____, _____, _____
- Area Navigation and Four Dimensional Trajectories _____

3) Provide a short description of each of the 5 concepts/technologies described by Dr Felder. WHAT function do they provide to flightcrew and/or air traffic control.

- Required Navigational Performance

4) Dr Felder spoke of the “challenges” in building NextGen. He described the problem as follows:

- Technology cycle is inside the development cycle
- Cannot be managed with the dogma of the Industrial Revolution (“What would Henry Gantt do?”)

What did Dr Felder mean? Give an example. What is the solution to this problem?