FAA Update
Society of American Military Engineers
May 8, 2013

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Current FAA

• FAA Mission is to provide the safest, most efficient aerospace system in the world
• We have a piece in everything used in aviation and own and operate the National Airspace System – 24/7, 365 days a year
• $15 billion annual budget.
• FAA has 48,000 Employees
  ‣ 15,000 controllers
  ‣ 4,500 aviation safety inspectors
  ‣ 6,000 technicians operating and maintaining the equipment
  ‣ 2,000 engineers of all disciplines from aerospace to civil
National Airspace System

• Is the most complex and efficient aviation system in the world
• One of the very few, if not only, complex system used by the public and that is owned and operated by the Federal Government 24/7
• Over 40,000 operational facilities with over 70,000 pieces of equipment from runway edge identifier lights to complex radar automation systems
• Approximately 19,000 airports
• 600 air traffic control facilities
• Current NAS is getting old and is based on WWII type technology
What is NextGEN

- Continuous improvement and modernization of the invisible infrastructure or our national airspace
  - Monumental and historic movement forward in flight
- Integrates new and existing technologies, including satellite navigation and advanced digital communications
  - Evolution from ground-based WWII type technology to modern satellite-based, internet type of air traffic management
  - Involves all phases of flight
  - Requires large private investment in avionics in the aircraft
Transformation of the National Airspace System

• Complete transformation on the in the management and operation of how we fly
  ✗ reduce delays, save fuel, and lower carbon emissions.
• NextGen will provide the consumer with a better travel experience
  ✗ On time travel, better predictability, smoother flow
• NextGen’s advanced infrastructure will continually share information in real-time to improve air transportation’s safety, speed, efficiency, and environmental impacts
NextGen Basics
Today

Hurry Up and Wait

Departures (on the ground)
NextGen Basics

Future

Metered Departures – No Waiting

Departures (on the ground)
NextGen Basics
Today

Stair Step Up & Down

Enroute (Elevation View)
NextGen Basics
Future

Optimum Climb & Decent

Enroute (Elevation View)

LAX

PHL

FAA
NextGEN
Follow Established Ground Based Airways

Enroute (Plan View)

LAX

PHL
NextGen Basics
Future

Direct Routing

Enroute (Plan View)

LAX

PHL
NextGen Basics
Today

Holding Patterns

Arrivals
(Plan View)

PHL
NextGen Basics

Future

Metered Arrivals
“Clear to Land”

Arrivals
(Plan View)

PHL
Benefits of NextGEN

- Transformative change is necessary to meet expected aviation increase while maintaining the necessary levels of safety and efficiency
- New procedures that combine to make air travel more convenient, predictable and environmentally friendly
- Benefits local communities
  - Enables consistent access into local airports even in bad weather
Nebraska Airports
Nebraska NextGen Approaches
NextGen Enhances Safety

- The FAA’s top priority is ensuring safe skies and airfields, and NextGen innovation and improvements are delivering just that.
- NextGen is providing air traffic managers and pilots with tools to proactively identify and resolve weather and other hazards.
NextGen is Economic Impact

- Aviation is a vital contributor to our nation’s economic health and NextGen is the required modernization of a key national industry
- The aviation industry:
  - Contributes $1.3 trillion in total economic activity
  - Generates nearly 10.2 million jobs with $394.4 billion in earnings
  - Generates $785 billion in value-added economic activity
  - Accounts for 5.2 percent of the Gross Domestic Product (GDP)
  - Accounts for more than $562B in goods shipped by air every year
Summary

• Our nation’s economy depends on aviation
• Whether traveling for business or pleasure
  NextGen means safer skies and fewer delays
• NextGen enables the system and management that is nimble and responsive to the demand of commercial airlines—today and tomorrow
Questions?

NextGEN

www.faa.gov/nextgen