

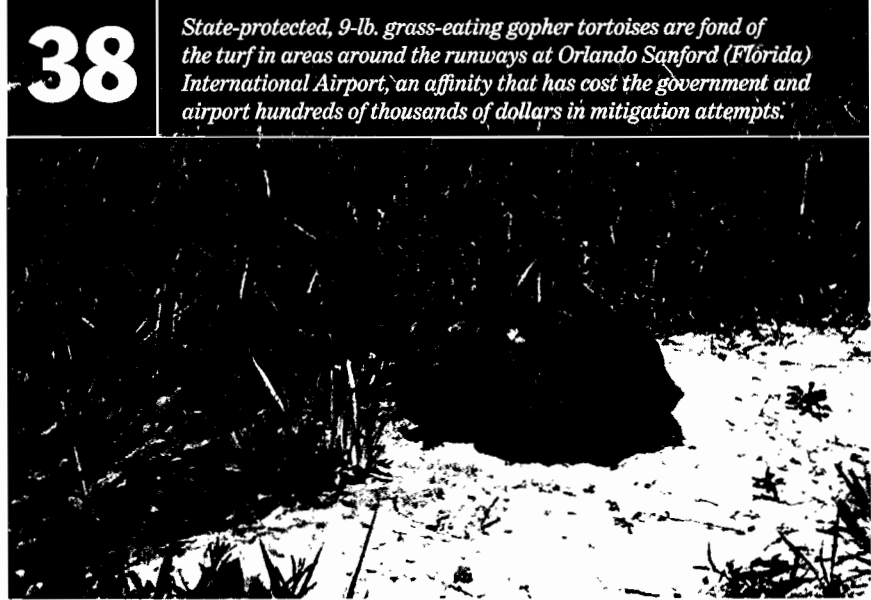
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AVIATION WEEK

& SPACE TECHNOLOGY



38

State-protected, 9-lb. grass-eating gopher tortoises are fond of the turf in areas around the runways at Orlando Sanford (Florida) International Airport, an affinity that has cost the government and airport hundreds of thousands of dollars in mitigation attempts.

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THE WORLD

- 10 **Agencies probe** failure of a Soyuz to place two European navigation satellites into their circular orbit
- 11 **Pilatus preparing** its PC-24 twin-engine business jet for a first flight next spring after prototype rollout
- 11 **Obituary for** retired NASA astronaut Steven Nagel, who flew four shuttle missions, two as captain

MISSILE DEFENSE

- 20 **Israel's Iron Dome** counter-rocket battery system a success story in latest conflict with Palestinians
- 21 **Now that** Ground-Based Missile Defense has succeeded, MDA turns to improving the kill vehicle

DEFENSE

- 23 **Most powerful** Pentagon acquisition official about to give contractors what they want: more competition
- 24 **Top Pentagon** contractors hone their lobbying to be more creative in push for a competitive advantage
- 25 **Indonesian military** has been on a buying spree that is likely to hold steady for the next decade

- 46 **AirTanker, which** provides U.K.'s air-to-air refueling capability, wants to help fill NATO's tanker shortfall

SPACE

- 27 **NASA's heavy-lift** Space Launch System rocket takes key step toward carrying humans into deep space

AIR TRANSPORT

- 28 **Increasing A380** ops at Heathrow show more challenges that could emerge at other legacy airports
- 30 **Results of tests** of a ceramic engine nozzle on a modified 787 show potential for fuel savings on future designs
- 31 **Japan devising** plan for a second aircraft type, to raise the industry to the importance of Japanese autos

- 32 **Increasing number** of airlines see benefits in letting passengers handle their own baggage

UTILITY AIRCRAFT

- 33 **Viking believes** its upgraded Series 400 Twin Otter has found a place in the civil and military markets

ON THE COVER

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CLEARING THE AIR
Managing Wildlife Hazards

34 **Hundreds of kittiwakes on the runway at the St. George Island, Alaska, airport provide an extreme example of the threat that wildlife can pose to aviation. Retired biologist Bob Martinka, who took the cover photo in 2010, was in charge of harassing the birds from the runway whenever passenger or cargo flights were due. His tools included propane cannons, devices that are used around the world for the purpose. But there are some intriguing new ideas for decreasing the chances of aircraft and wildlife coming into contact (see articles starting on page 34).**



28 **Senior air traffic controllers at Heathrow say the biggest impact of A380 operations comes from the spacing requirement.**



23 **Iron Dome has demonstrated improved performance, scoring an almost 90% success rate.**

20 **Pentagon unveils new guidance that expands the competition in its contracting.**

AVIATION SAFETY

34 FAA's approach to mitigating wildlife strike risks seem to be working, especially at commercial airports



38 Airport in Florida tries artificial turf to contain protected tortoises and keep them away from runways

38 Southwest Florida airport quick to grasp the importance of a well-planned wildlife mitigation effort



40 Increase in the number of large birds flying near JFK prompts an on-property shooting program

41 High-tech meets old-school at BWI as wildlife mitigation cuts the number of damaging bird strikes



42 Wildlife mitigation at airports, hardening of airframes and engines to birds are not foolproof solutions

ENGINEERING

44 Aerospace's growing need for higher volumes of thermoplastics may bring more investment in tooling

VIEWPOINT

50 U.S.-led drive to develop space that starts with the Moon would be a means of broadening cooperation