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DARPATech

2002 Symposium

Transforming Fantasy

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Transforming Fantasy

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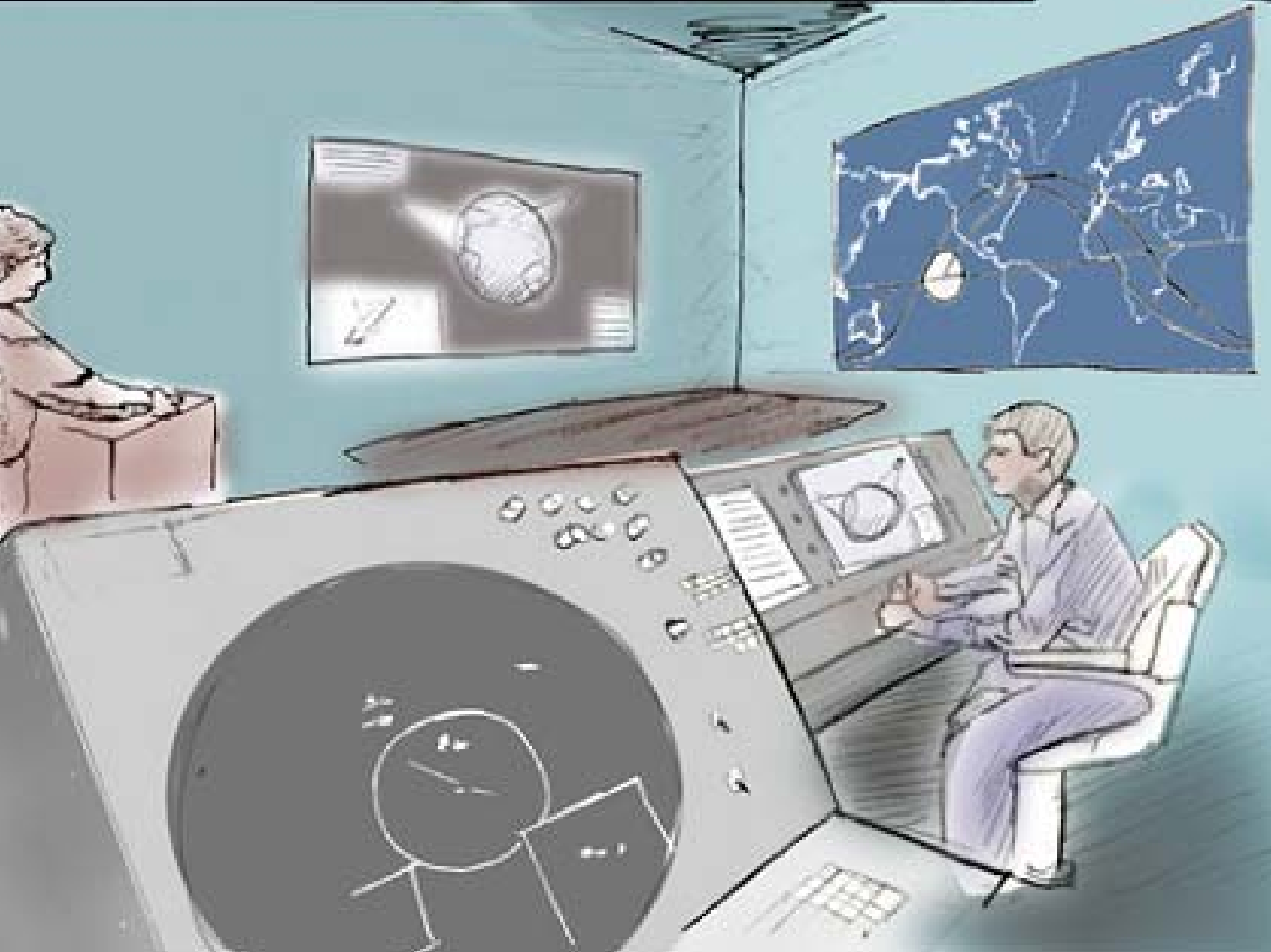
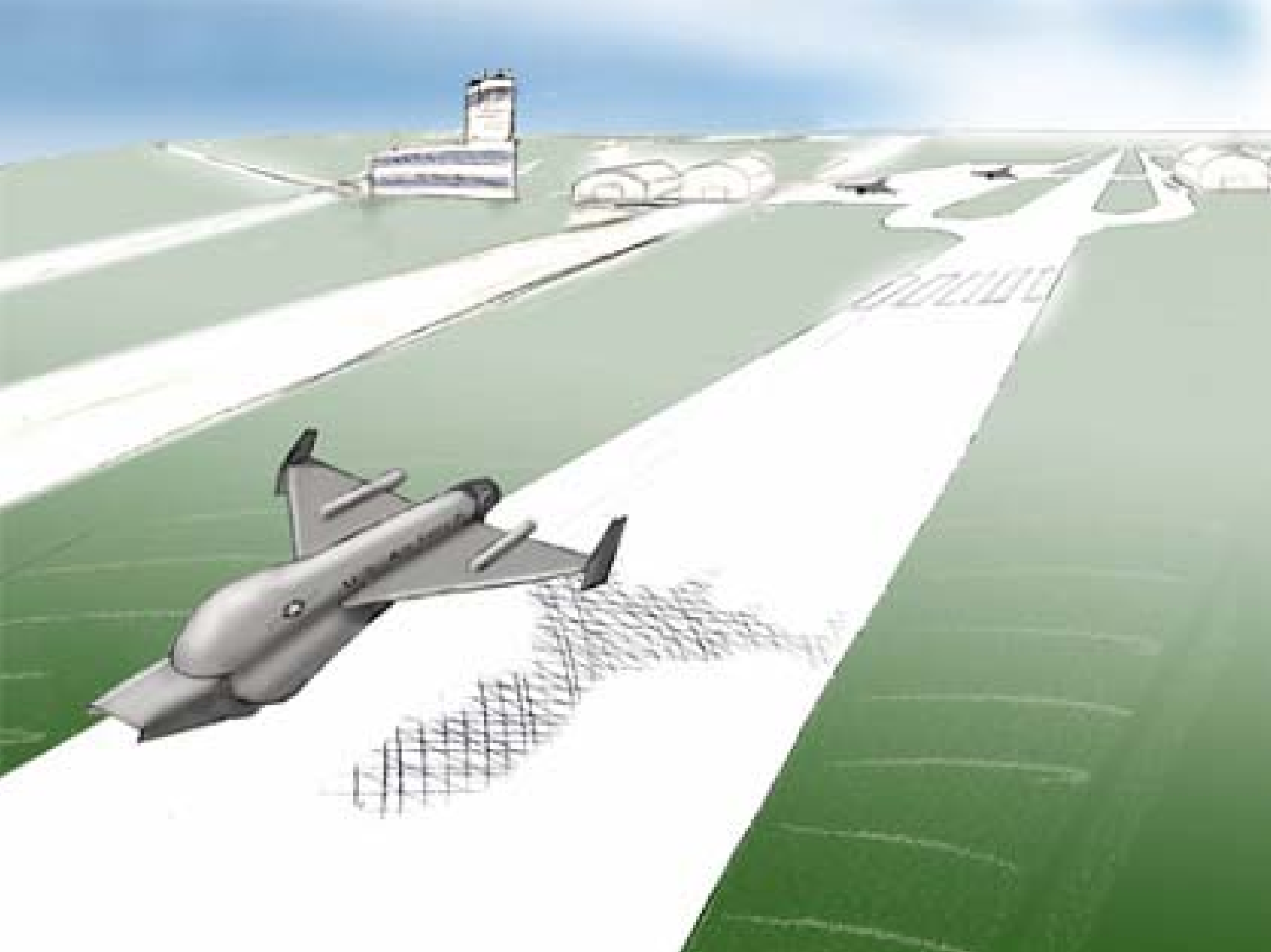
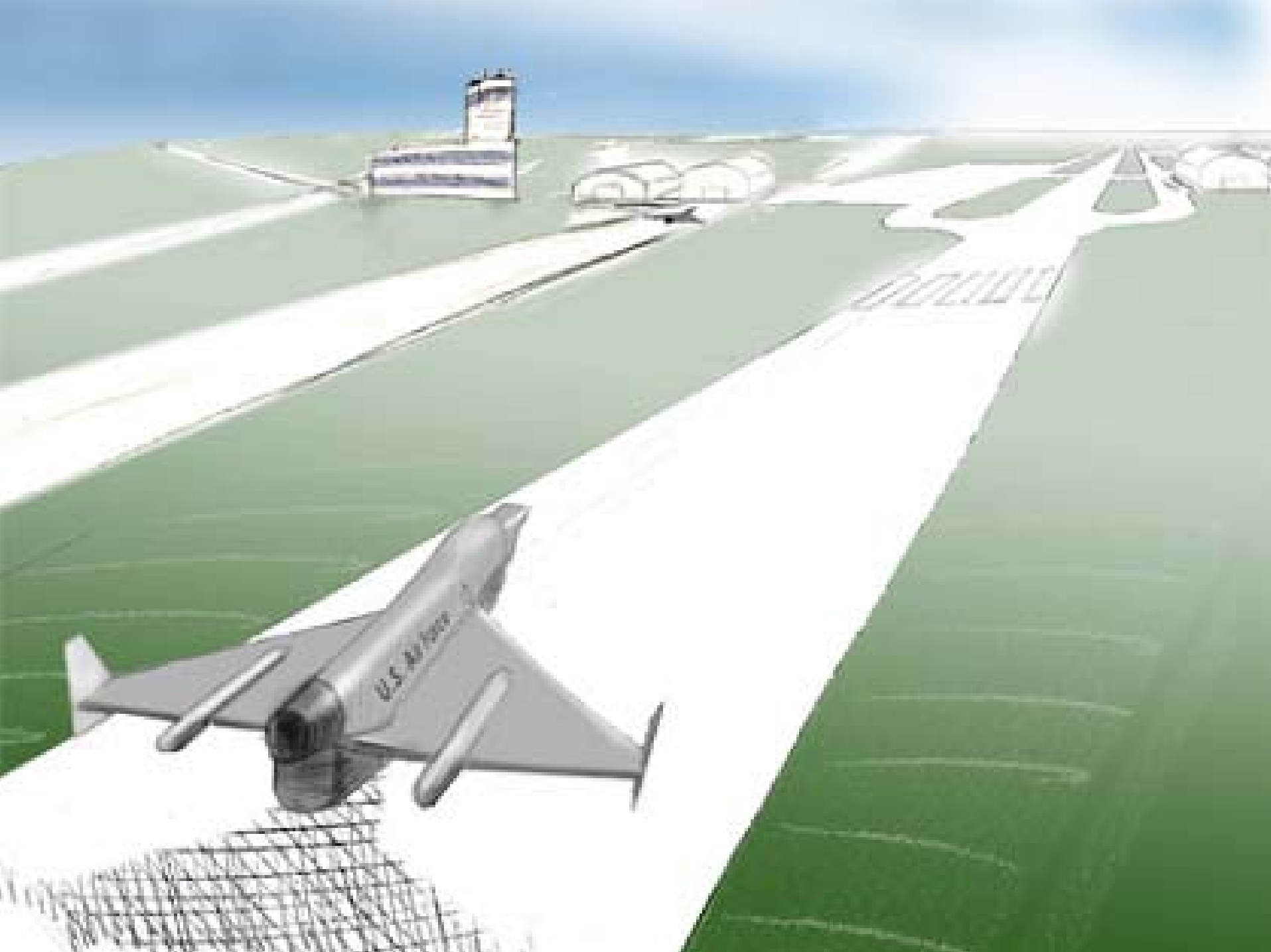
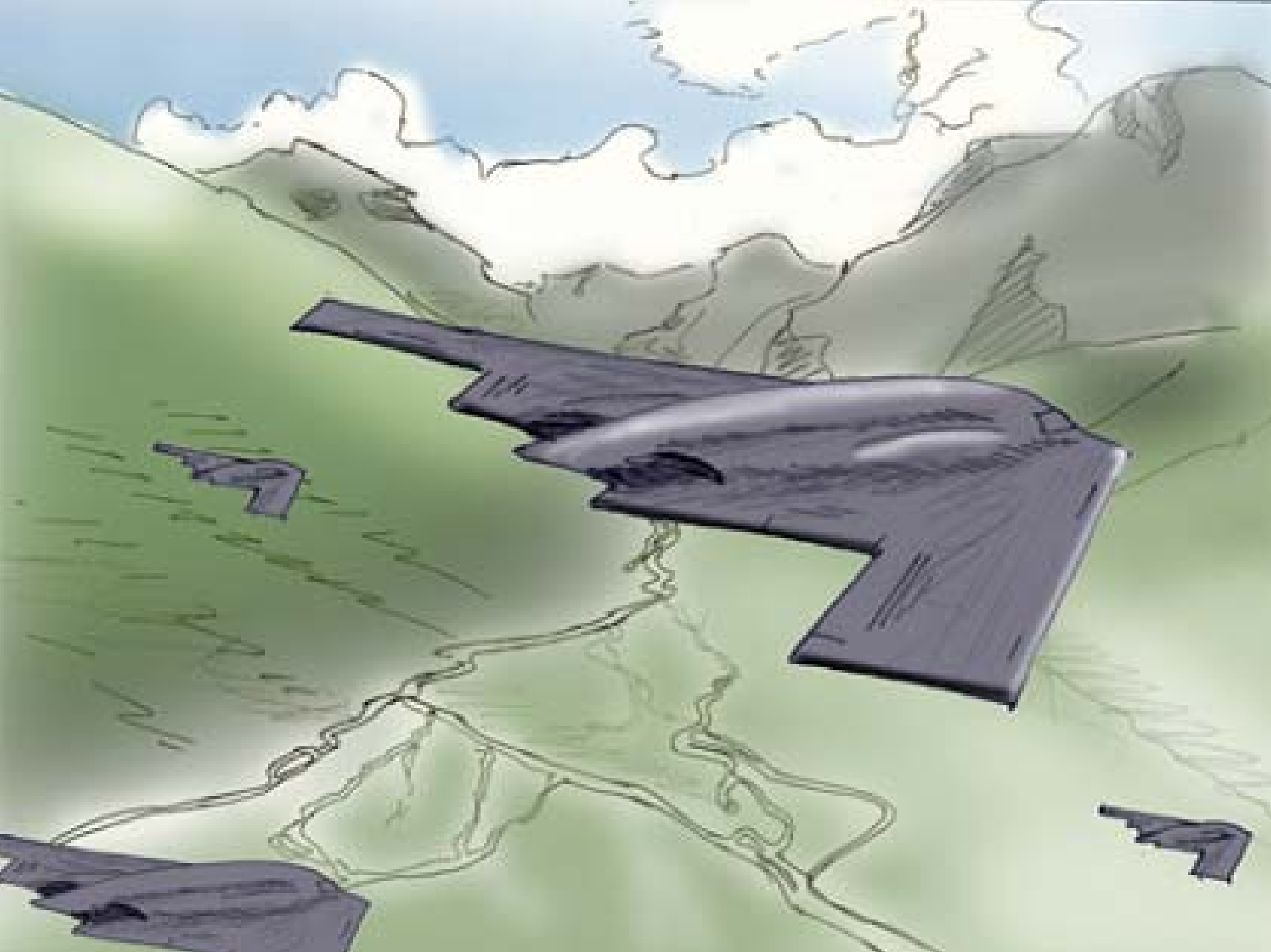
Rascal

DARPA DEVELOPS
LIGHTSABER
CITY IN CHAOS
QUAD SETS NUKE






U.S. AIR FORCE



RASCAL

Responsive Access, Small Cargo, Affordable Launch

Objective:	***Responsive, Routine & Small-Scale access to space***
Approach:	***Blend of Reusable & Expendable vehicles***
	Aircraft reusable first-stage capable of Exo-Atmospheric Flight
	Low-cost expendable upper stages
Goals:	***130 kg to orbit and at least 50 kg to LEO Anytime, Any Inclination.***
	High Flight Rate, on-time performance, low cost
	$750,000 per launch at 20 launches a year

Space Access for Exploring Military Space CONOPS and Technology

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Distribution Statement A. Approved for public release; distribution is unlimited.

Technology Frontiers

- Highly operational, reusable launch vehicles
- Trans-atmospheric flight
- High Mach number and accelerator turbojet propulsion
- Low-cost expendable launch vehicles
- Adaptive launch operations
- Payload vibration isolation

Distribution Statement A. Approved for public release; distribution is unlimited.

RASCAL Performers

CRC

SPACE ACCESS

SPACE LAUNCH CORPORATION

PIONEER ROCKETPLANE

NORTHROP GRUMMAN Integrated Systems

DELTA VELOCITY

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