INFOGRAPHIC · AVIATION & AI

US AIRSPACE CHAOS: AI AT THE CENTER OF THE CRISIS

AI in air traffic control, a telecom failure and the risk of scaling without testing

Aridio Silva — Independent Researcher
ORCID 0009-0008-2411-6995

15 NOV 2026



© 2026 Aridio Silva @aridiosilva · November 2026 · Facts checked up to 15 Nov 2026

OVERVIEW

US airspace chaos: AI at the center of the crisis

1 AI at national scale

On Nov 10, three days before the ground stop, the FAA switched on the SMART AI tool at all 22 en route centers (ARTCCs). [2][3]

2 The ground stop

On Nov 13, communication issues at multiple centers led to a nationwide ground stop of about 4h21. [1][4][6]

3 The diagnosis

Preliminary official account: routers overloaded during the copper-to-fiber migration. Per the base text, the investigation has not ruled out an interaction between the new software and the telecom network. [7][12]

22
ARTCCs running SMART

US$875M
contract with Air Space Intelligence

~200
real-time data streams

4h21
nationwide ground stop on Nov 13

Root cause under investigation; AI involvement has not been ruled out.

Sources: [1][2][3][4][6][7][12]

© 2026 Aridio Silva @aridiosilva · November 2026

TIMELINE

How the crisis unfolded

Sept 2026

Pilot in the Washington region: 3 airports, advisory tool. On Sept 21, a separate Northeast outage came from a Verizon fiber cut during Amtrak works. [8][9]

Oct 2026

Lawmakers and unions question testing, accountability and contingency plans before national scale-up. [13]

Nov 10

SMART goes live at all 22 ARTCCs nationwide. [2][3]

Nov 13

About 3:54–8:15 pm EST: nationwide ground stop after communication issues at multiple centers. [1][4][6]

Nov 14

2,500+ more cancellations; the root cause is still under investigation. [7]

© 2026 Aridio Silva @aridiosilva · November 2026

THE SMART SYSTEM

What the SMART platform is

- Strategic Management of Airspace, Routes and Trajectories, by Air Space Intelligence; contract of about US$875 million
- Fuses ~200 real-time streams: weather, runway capacity, schedules, routes and staffing
- Predicts bottlenecks hours or days ahead and recommends strategic reroutes
- Advisory only: controllers accept or decline each suggestion
- FAA-reported results: 180 reroutes, ~10 min and ~80 gallons of fuel saved per flight

Sources: [2][3][8]

WHY IT MATTERS

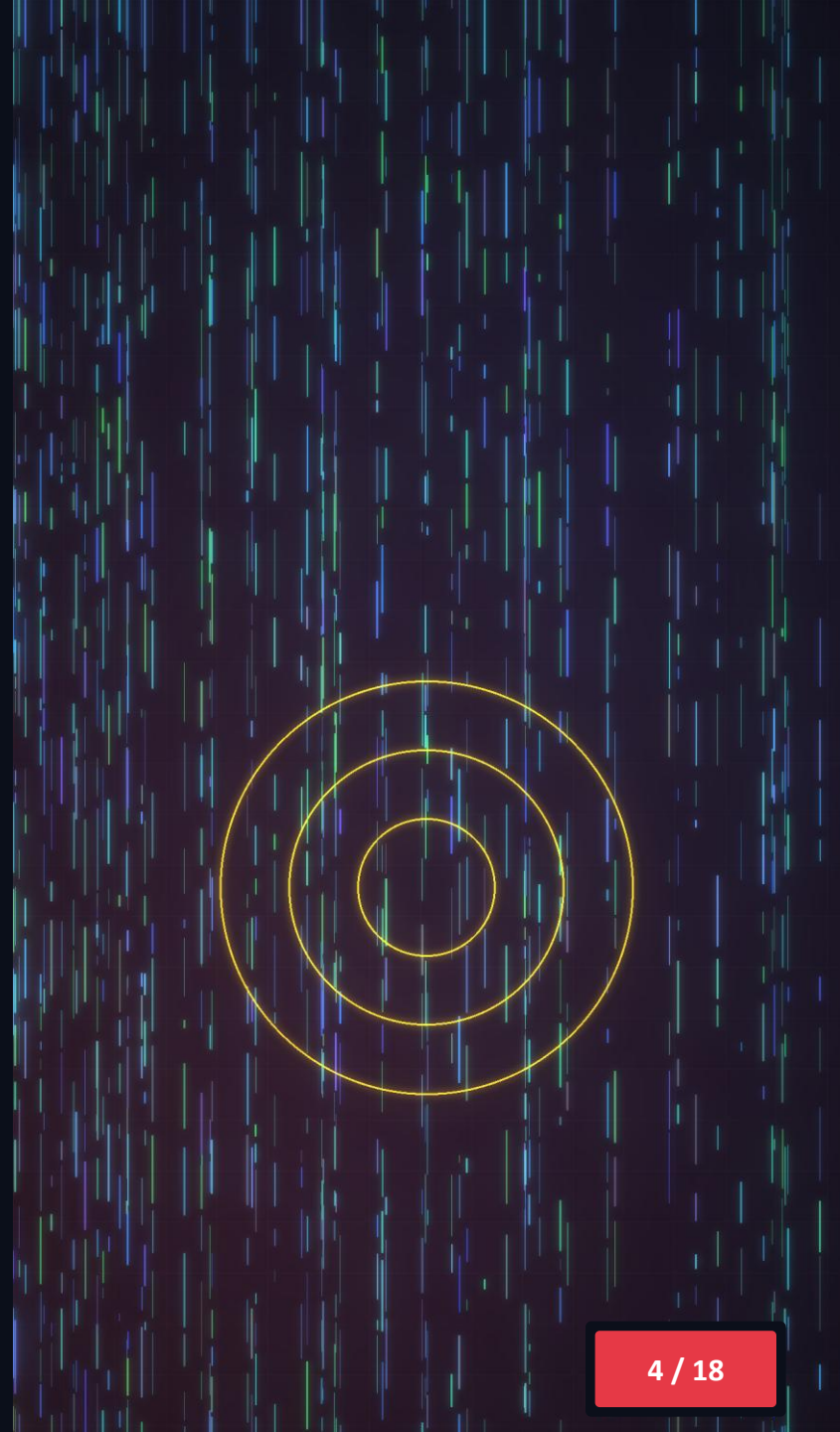
The tool shapes planning for the whole airspace, not a single airport.

(+) POSITIVE

Reported operational gains; the final decision stays with the controller.

(–) NEGATIVE

Gains are self-reported; we found no published independent evaluation.



© 2026 Aridio Silva @aridiosilva · November 2026

IGNORED WARNINGS

Unanswered questions before scale-up

- Oct 2026: lawmakers asked the FAA about accountability metrics, contingency plans and stress testing
- Unions also pressed for clarity on testing and accountability
- According to the base text, the expansion to 22 centers went ahead without these assurances being made public
- The original letters were not located during verification; their content relies on secondary reports

Sources: [2][12][13]



WHY IT MATTERS

Scaling without public answers weakens external auditability.

(+) POSITIVE

Congress exercised oversight before the incident.

(–) NEGATIVE

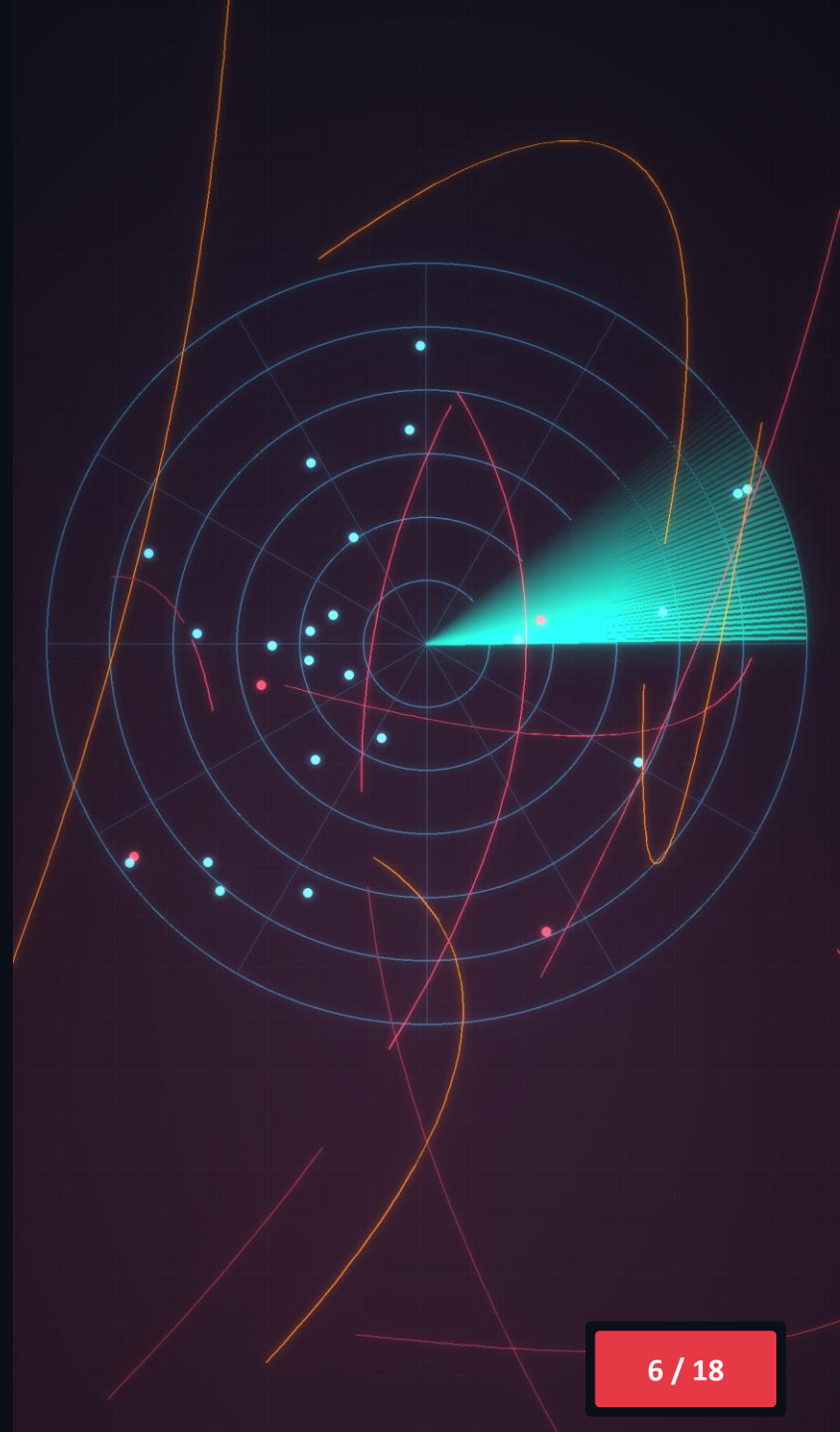
Without published metrics, system readiness cannot be assessed.

© 2026 Aridio Silva @aridiosilva · November 2026

THE GROUND STOP

Nov 13: the third nationwide ground stop

- The FAA cited communication issues at multiple en route centers (ARTCCs)
- Radio frequencies and data links between centers and aircraft were affected
- Nationwide ground stop from about 3:54 to 8:15 pm EST, roughly 4h21
- Only the 3rd in US history, after 9/11 (2001) and the NOTAM system failure (2023)



Sources: [1][4][6][7][11]

WHY IT MATTERS

A telecom failure was enough to halt the nation's commercial aviation.

(+) POSITIVE

The safety protocol worked: flights were held on the ground.

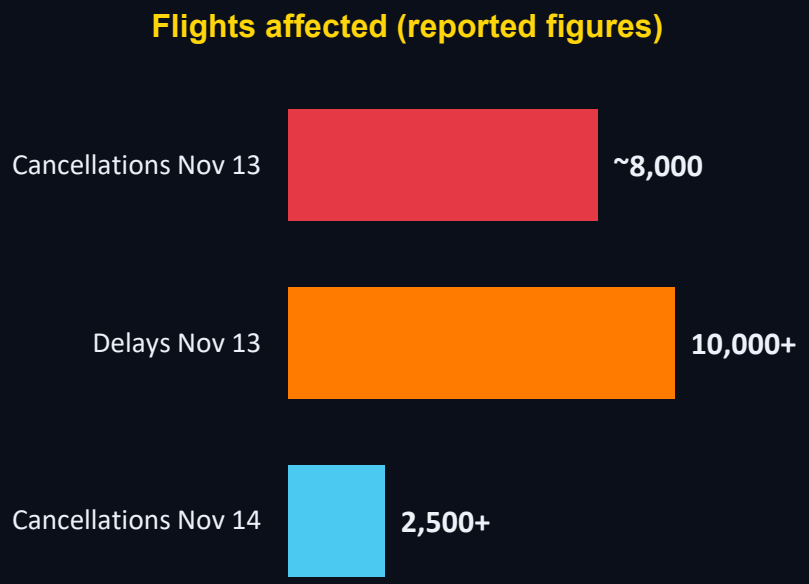
(–) NEGATIVE

Existing redundancy did not prevent the nationwide stop.

© 2026 Aridio Silva @aridiosilva · November 2026

CASCADE EFFECT

Cascade effect across the network



- About 8,000 cancellations and more than 10,000 delays on Nov 13
- More than 2,500 cancellations on Nov 14
- The base text mentions ~13,000 flights affected; figures vary by source

Sources: [4][5][6][7]

WHY IT MATTERS

Crews and aircraft out of position extend the impact for days.

(+) POSITIVE

Airlines published updates for passengers.

(–) NEGATIVE

Thousands of passengers stranded; total losses not yet quantified.

© 2026 Aridio Silva @aridiosilva · November 2026

OFFICIAL DIAGNOSIS

The preliminary official account

- DOT (Secretary Sean Duffy): air traffic control routers overloaded with data, giving inconsistent readings
- According to the base text, during the copper-to-fiber migration a new router sent ~1,000 connection attempts every few seconds (flooding), bringing down legacy analog equipment
- GAO: as of May 2026, 2,560 of 5,170 copper lines had been replaced by fiber
- DOT and Air Space Intelligence deny that SMART caused the failure

Sources: [7][10]

WHY IT MATTERS

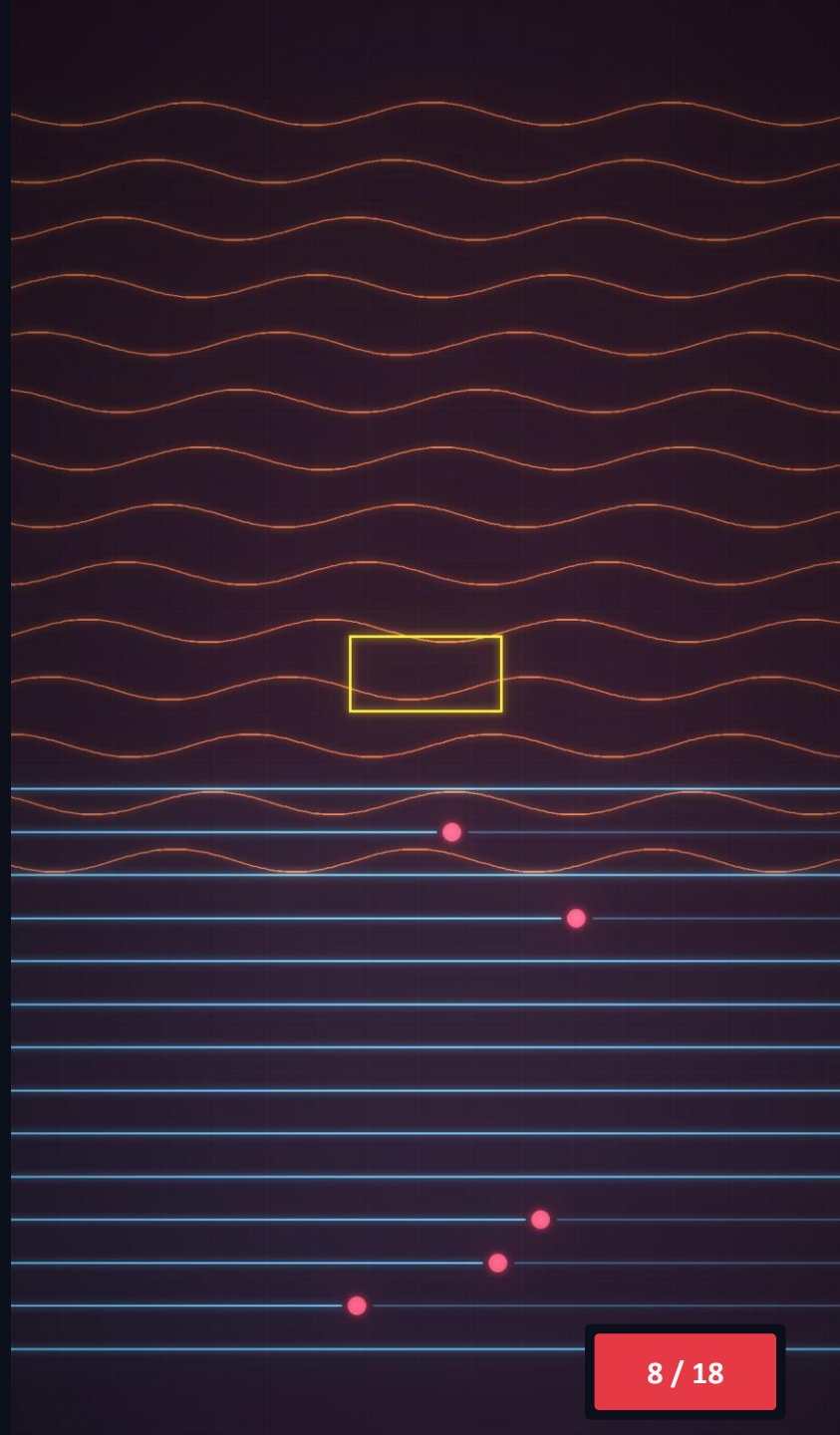
Half the network was still copper: modernization coexists with legacy.

(+) POSITIVE

A concrete technical hypothesis, testable through log audits.

(–) NEGATIVE

No final root-cause report has been published yet.



© 2026 Aridio Silva @aridiosilva · November 2026

SYSTEMIC FAILURE 1

Coupling of critical systems

- A platform ingesting ~200 simultaneous streams depends on the physical network that carries them
- National scale requires load and interoperability testing with existing infrastructure
- The FAA's telecom base is old: half of the lines were still copper in May 2026
- There is no evidence that SMART generated the traffic that brought the network down

Sources: [2][10]

WHY IT MATTERS

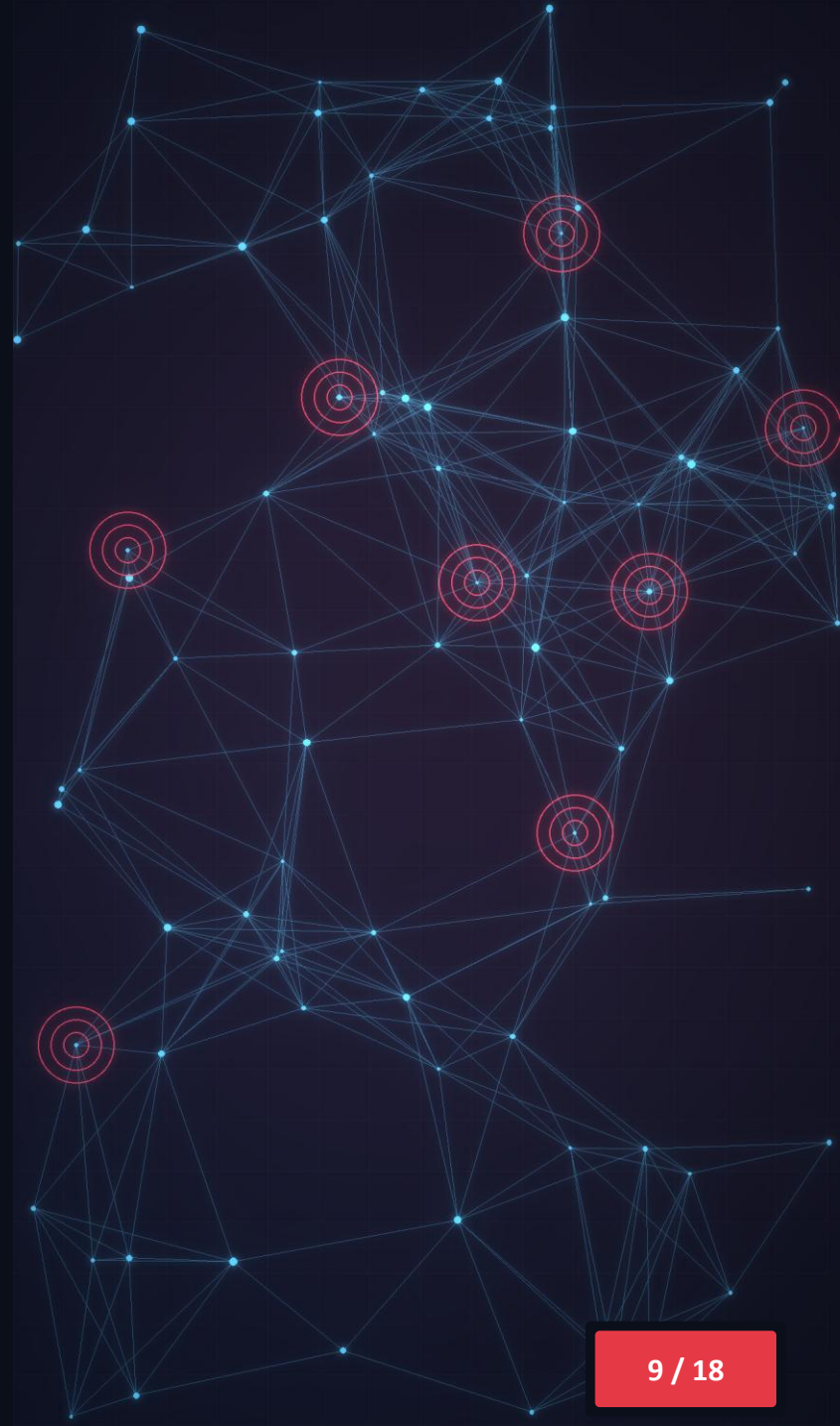
New systems inherit the weaknesses of the infrastructure they run on.

(+) POSITIVE

The problem is known and measurable: the line inventory exists.

(–) NEGATIVE

Simultaneous changes (network and software) make the cause harder to isolate.



© 2026 Aridio Silva @aridiosilva · November 2026

SYSTEMIC FAILURE 2

No gradual validation

- Coverage reached 100% of centers with no public answer to Congress's questions
- In mission-critical systems, practice is a staged rollout: pilot, canary and measured expansion
- Each stage needs exit criteria and a tested rollback
- The Washington pilot (Sept 2026) covered only 3 airports

Sources: [8][13]

WHY IT MATTERS

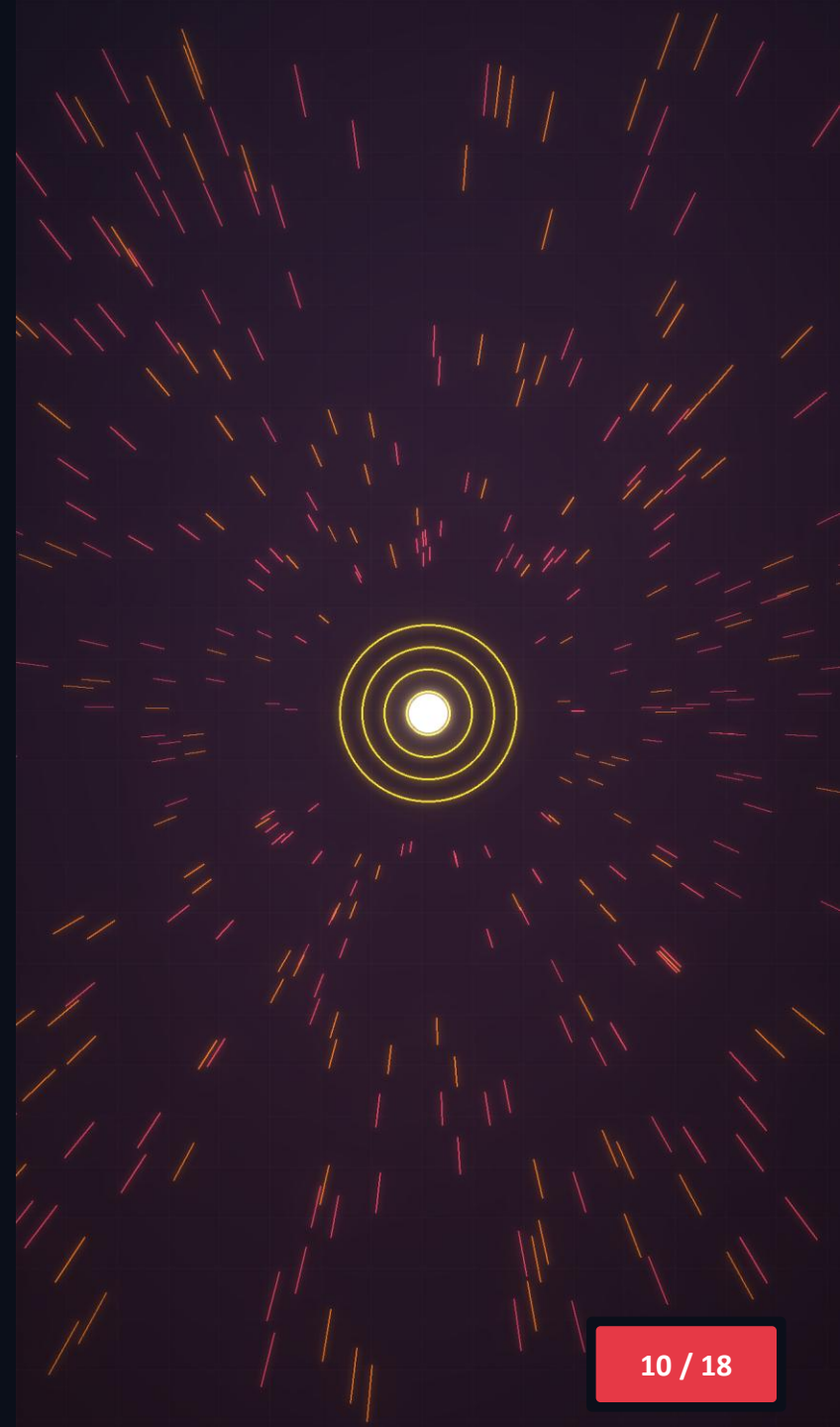
Staged rollout limits the blast radius of unknown defects.

(+) POSITIVE

There was a pilot before the expansion.

(–) NEGATIVE

From a 3-airport pilot to the whole country in about two months.



© 2026 Aridio Silva @aridiosilva · November 2026

OPEN INVESTIGATION

Root cause still open

- As of Nov 14, the root cause remained under investigation
- According to the base text, DHS does not rule out an interaction between the new software and the telecom outage until the network-log audit is complete (not independently confirmed)
- The three-day temporal coincidence was highlighted by The Washington Times
- Temporal coincidence does not prove causation

Sources: [7][12]

WHY IT MATTERS

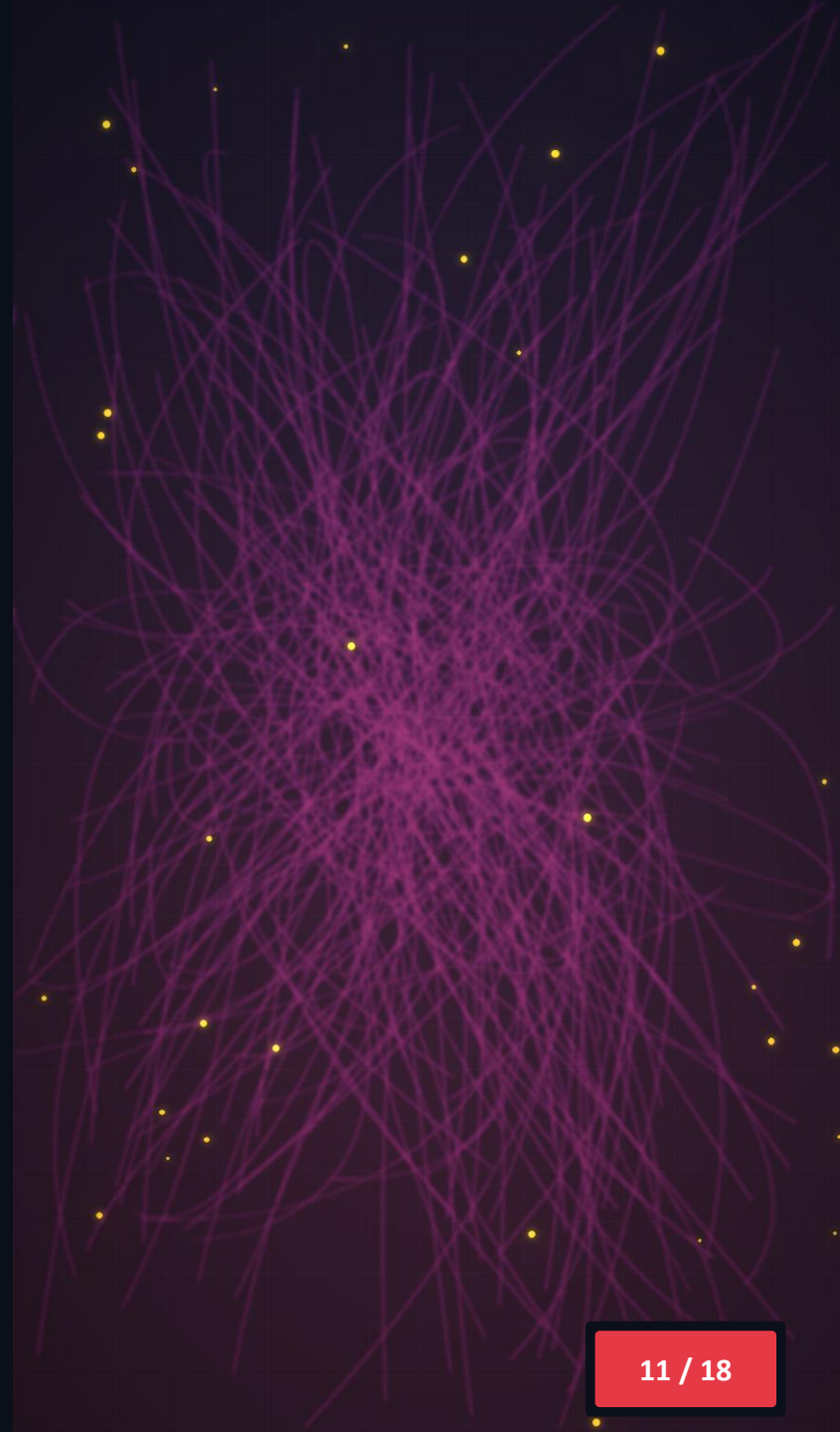
Premature conclusions, in either direction, hinder the fix.

(+) POSITIVE

A log audit can separate the hypotheses objectively.

(–) NEGATIVE

Meanwhile, public trust in the system is under pressure.



© 2026 Aridio Silva @aridiosilva · November 2026

RISK MATRIX

Comparative risk matrix

Factor	Type	Evidence	Severity*	Confidence
Legacy telecom (copper/analog)	Infrastructure	GAO: 2,560 of 5,170 lines migrated [10]	**HIGH**	Confirmed
Router flooding during migration	Network	DOT preliminary diagnosis [7]	**HIGH**	Official, preliminary
SMART national scale-up	Software / AI	Went live 3 days before the outage [2][12]; network interaction not ruled out	**MEDIUM (uncertain)**	Not ruled out
Governance and testing gaps	Governance	Questions from Congress [13]	**HIGH**	Medium

**Author's qualitative assessment based on the cited sources. Confidence = how well the evidence supports the factor.*

© 2026 Aridio Silva @aridiosilva · November 2026

LESSONS

What to do before scaling

1
Staged rollout
Pilot, canary and stepwise expansion with exit criteria.

2
Stress testing
Load and interoperability, including legacy interfaces.

3
Fail-safe and rollback
Fast, tested return to the previous state.

4
Telecom first
Modernize the physical base before scaling the software.

5
Independent audit
External review of security and network logs.

6
Public metrics
Published accountability indicators.

7
Human in the loop
The controller keeps the final decision.

Author's synthesis from [1][7][10][13]

© 2026 Aridio Silva @aridiosilva · November 2026

CONCLUSION

AI at the center of the crisis

SMART, the FAA's AI tool, went live at all 22 ARTCCs three days before the nationwide ground stop. Per the base text, the investigation has not ruled out an interaction between the new software and the telecom network.

The episode is a warning for governments and critical-infrastructure operators: fast, large-scale AI adoption cannot skip certification, stress testing and the upgrade of the physical telecom base. Deploying national solutions on fragile foundations and without technical scrutiny can turn promising advances into catalysts of operational crises.

Correlation ≠ causation. The root cause is still under investigation and AI involvement has not been ruled out; the core lesson is the governance of critical-infrastructure modernization.



© 2026 Aridio Silva @aridiosilva · November 2026

GLOSSARY (1/2)

Key terms

FAA — Federal Aviation Administration; regulates civil aviation and runs US air traffic control.

DOT — US Department of Transportation, the FAA's parent department.

DHS — US Department of Homeland Security.

ARTCC — Air Route Traffic Control Center; 22 in the US, handling en route (cruise) traffic.

TRACON — Terminal radar approach control: aircraft arriving at and departing airports.

SMART — Strategic Management of Airspace, Routes and Trajectories: the FAA's advisory AI tool.

Ground stop — Order holding on the ground flights bound for an area or the whole country.

ATC Zero — A control facility temporarily cannot provide air traffic services.

NOTAM — Notice to Air Missions; its system failure in 2023 halted US departures.

Flooding — Excess connection attempts or packets that saturate network equipment.

© 2026 Aridio Silva @aridiosilva · November 2026

GLOSSARY (2/2)

Key terms

Router — Device that forwards data between networks.

Fiber vs. copper — Fiber carries light with more capacity; copper is the legacy electrical base.

Legacy system — Old technology still in service, often hard to integrate.

Mission-critical — A system whose failure halts an essential operation or endangers lives.

Stress test — Testing under extreme load to reveal limits and failure modes.

Interoperability — Ability of different systems to exchange data reliably.

Staged rollout / canary — Deploying to a small share first, with monitoring, before expanding.

Rollback — Quick return to the previous version when something fails.

Human-in-the-loop — A person keeps the final decision over an automated suggestion.

GAO — US Government Accountability Office, the audit agency of Congress.

© 2026 Aridio Silva @aridiosilva · November 2026

Primary sources and verification

[1] FAA — Statement on Nationwide Ground Stop
https://www.faa.gov/newsroom/faa-statement-nationwide-ground-stop

[2] FLYING — FAA SMART AI Now Active at 22 ARTCCs Nationwide (10 Nov 2026)
https://www.flyingmag.com/faa-smart-ai-now-active-at-22-artccs-nationwide/

[3] Airways — FAA SMART nationwide, 22 centers
https://airwaysmag.com/new-post/faa-smart-nationwide-22-centers

[4] CNN — Some US flights resume after hours-long ground stop (13 Nov 2026)
https://www.cnn.com/2026/11/13/us/live-news/flights-ground-stop-faa

[5] American Airlines Newsroom — Update on FAA's nationwide ground stop
https://news.aa.com/news/news-details/2026/Update-on-FAAs-nationwide-ground-stop/

[6] ABC7 Chicago — Nationwide ground stop lifted, FAA says
https://abc7chicago.com/live-updates/faa-ground-stop-live-updates-what-know-nationwide-flights-are-grounded/20038887/entry/20039345/

[7] Wikipedia — 2026 FAA nationwide ground stop (consulted 15 Nov 2026)
https://en.wikipedia.org/wiki/2026_FAA_nationwide_ground_stop

Accessed on 15 Nov 2026.

© 2026 Aridio Silva @aridiosilva · November 2026

Primary sources and verification

[8] AVweb — FAA Turns to AI To Ease ATC Strain (Sept 2026)
https://avweb.com/aviation-news/faa-turns-to-ai-to-ease-atc-strain/

[9] Cybernews — FAA ends Northeast ground stops after 8-hour comms outage, Verizon backup cable (Sept 2026)
https://cybernews.com/news/faa-northeast-ground-stops-comms-outage-verizon-backup-cable/

[10] Fox Business — FAA grounds flights at major Northeast airports after fiber line cut (GAO copper→fiber figure)
https://www.foxbusiness.com/economy/faa-grounds-flights-major-northeast-airports-fiber-line-cut

[11] Wikipedia — 2023 FAA system outage
https://en.wikipedia.org/wiki/2023_FAA_system_outage

[12] The Washington Times (13 Nov 2026) — “FAA expanded AI air traffic tool days before nationwide ground stop”
Cited in the base text; URL/primary document not located during verification.

[13] US Congress letters to FAA (Oct 2026)
Cited in the base text; URL/primary document not located during verification.

Accessed on 15 Nov 2026.

© 2026 Aridio Silva @aridiosilva · November 2026