

Already Gone?

Where is the Crisis in

Airport

Congestion?

**Arnold Barnett,
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The Overall Pattern:

- *Fewer operations in 2001 than in 2000*
- *Fewer operations in 2002 than in 2001*
- *Fewer operations in 2003 than in 2002*
- *No projected increases in 2004*

We focus here on:

(1) Airports

(2) Congestion at Hubs

(3) Commercial Flights

Several forces are acting simultaneously to diminish congestion at hubs:

- *Hub activities of network carriers*
- *Activities elsewhere of low-cost carriers*
- *The proliferation of regional jets*

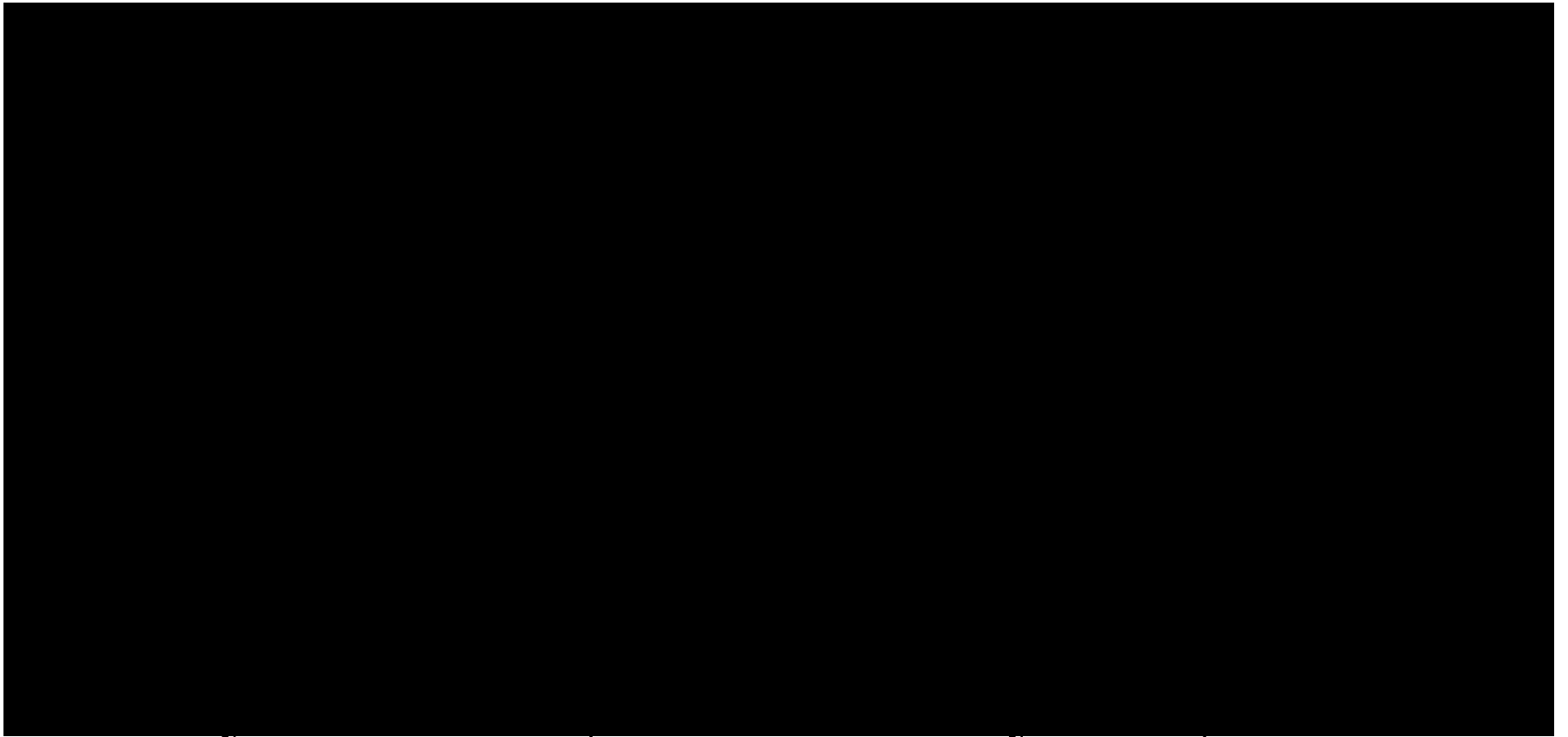
The network airlines have begun taking steps that should work against hub congestion:

- *“Depeaking” of Hub Operations*
- *Withdrawal of “Excess Capacity”*

Secondary Airports:

A Surprisingly Close Second

Origin/Destination Traffic between *Greater Boston* and *Greater Washington* in Two Periods



Origin/Destination Traffic between *Greater Los Angeles and the Bay Area*, 2nd Quarter 2002

<u><i>Airports</i></u>	<u><i>Share of Traffic</i></u>
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Primary/Primary	27%
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Primary/Secondary	46%
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Secondary/Secondary	28%
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Primary: LAX, SFO Secondary: OAK, BUR

Estimated Split of *New York City* Traffic Between Two Southern California Airports, *Spring 2003*

LAX  **NYC** **62%**

LGB  **NYC** **38%**

(Point-to-Point Passengers; LGB = Long Beach)

*What Other Secondary
Airports Could Bloom?*

Gary, Indiana?

Regional Jets:
Nonstop from Here to There

Examples:

BOS-JAX (DL) *(No ATL or especially CLT)*

FLL-RDU (DL) *(Ditto)*

And, of course, air traffic growth would be affected by further terrorism against airplanes.

Could 9/11 happen again?

“With the amount of security that we have in the aviation system today, the likelihood of a terrorist using aviation as the venue for future attack is *very low*.”

--Donald Carty, CEO, American Airlines, mid-2002

**Maybe, but the terrorists have
always been *fascinated by aviation*:**

**On a per-hour basis, US citizens
are about *400* times as likely to be
killed by terrorists during a
journey by air as at other times.**

And this statistic, prepared by my student Susan Martonosi.....

**is based exclusively
on data *prior to 9/11.***

The Transportation Security Administration (TSA) has done some very good things. In recent months, however, it has *abolished several security measures* for reasons that are not easy to fathom.

Why are the two baggage-security questions (“Has Anyone Unknown to You..”) now asked of *no one* rather than everyone?

**Why don't they
check *photo ID's* at the
boarding gate anymore?**

Why did they end *positive passenger bag match* (PPBM) when they extended physical screening to all checked bags?

**Why have they resumed
transporting *heavier US mail*
on US passenger planes?**

“TSA launched the joint pilot program...with the goal to increase the volume of mail carried on passenger aircraft *to the same or greater levels* that were transported prior to September 11, 2001.”

Is it appropriate for TSA to adopt such a purely economic objective?

CAPPS II:

The Perfect Storm?

CAPPS (Computer-Assisted Passenger Prescreening System) partitions passengers into two main groups:

- ***Selectees*, who get intense airport screening**
- ***Non-selectees*, who are screened less**

CAPPS II has friends in high places:

“the foundation of aviation security”

--DOT Secretary Norman Mineta

“the right answer to security”

--American Airlines CEO Carty

“the most important single project on TSA’s current agenda”

--TSA spokesman

CAPPS II will relay heavily on “*data mining*,” which is-- roughly speaking--a high speed trial and error search through existing data for important patterns and correlations.

The limits of data mining in this context were suggested in the *Washington sniper crisis*, when experts who “mined” data about previous serial killers *strongly believed that the perpetrators were white.*

**“There is no clear profile anymore,
not for terrorists and especially not
for suicide bombers.”**

--Senior Officer, *Israeli Defense Forces*

**Some MIT students
have written a paper
about how to “defeat”
CAPPS.**

**Stung by charges that
CAPPS II would involve ethnic
profiling and would violate
personal privacy, TSA may be
modifying the system in ways
that *could degrade its predictive
accuracy.***

Despite all this, CAPPS II could yield security improvements over CAPPS I under two conditions:

- the fraction of passengers designated selectees *does not decline*
- security processing *does not slacken* for either selectees or non-selectees

Unfortunately, *neither* of these conditions is likely to be satisfied.

TSA has stated that:

- **travelers “*may well notice*” that fewer passengers are selectees under CAPPS II**
- **non-selectees under CAPPS II “*clearly pose no threat of terrorism*”**

CAPPS II might be used in ways that *erode many security precautions in place today.* Thus, the “foundation” of security could pose a threat to security.

For various reasons, one could argue that there is an appreciable probability (*at least 10% per year*) of further successful terrorist acts against US domestic aviation. As noted, such acts could deeply cut the demand for air travel and *airport-traffic levels*.

Putting everything together, we reach

A Forecast:

US airport congestion will *not* again during this decade match the levels it reached in 2000. Hub traffic in 2009 will not exceed hub traffic nine years earlier.

**Is the importance of the
work presented at this
conference contingent on *a
future capacity crisis?***

(Hint: NO)