

# **Out-of-Band Demand Drivers for In-Band Resources: *ASNs and Telecom Policy***

**Version 1.0**

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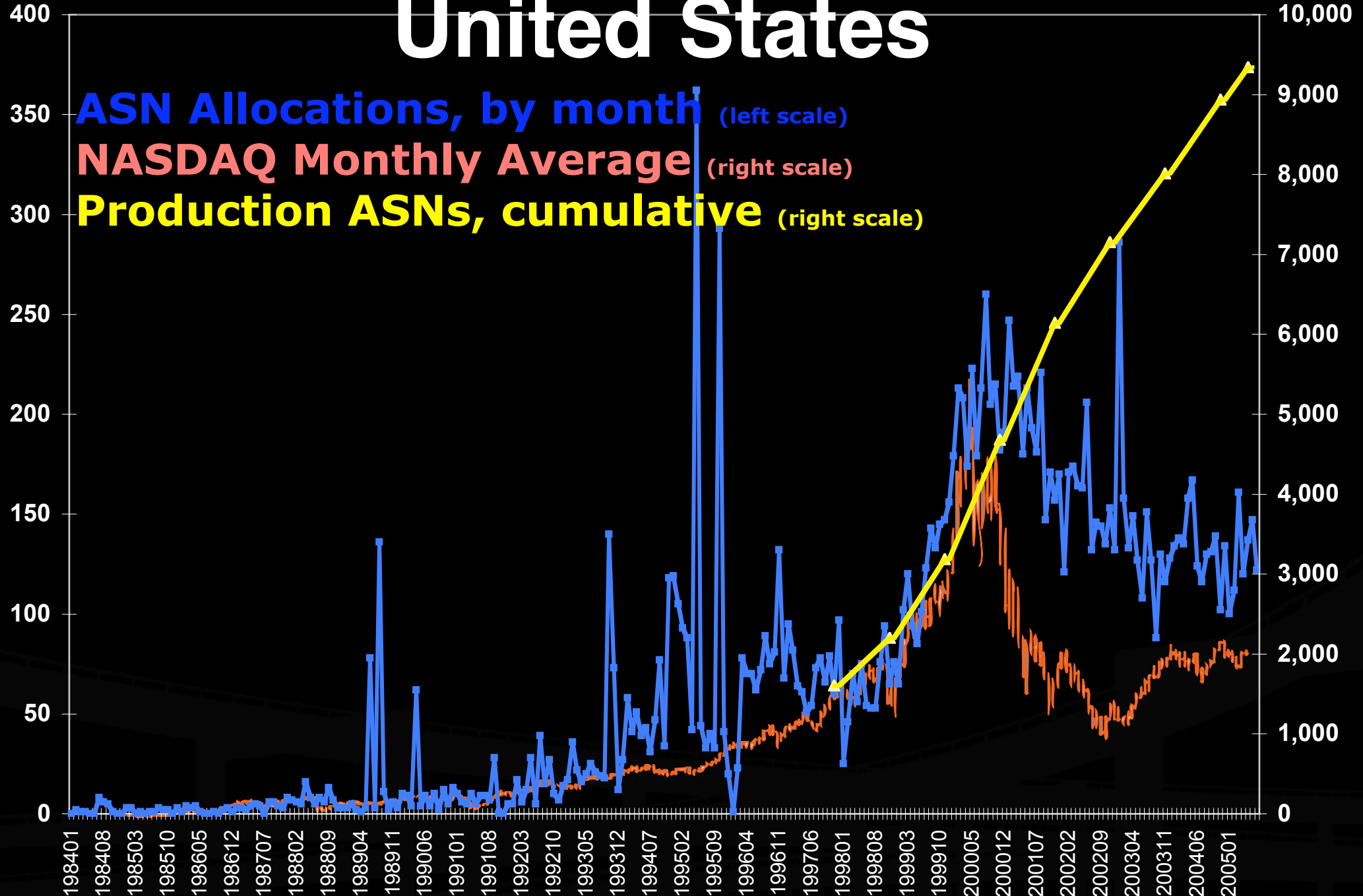
**Packet Clearing House**

# *Core Business/Ownership Evolving...*

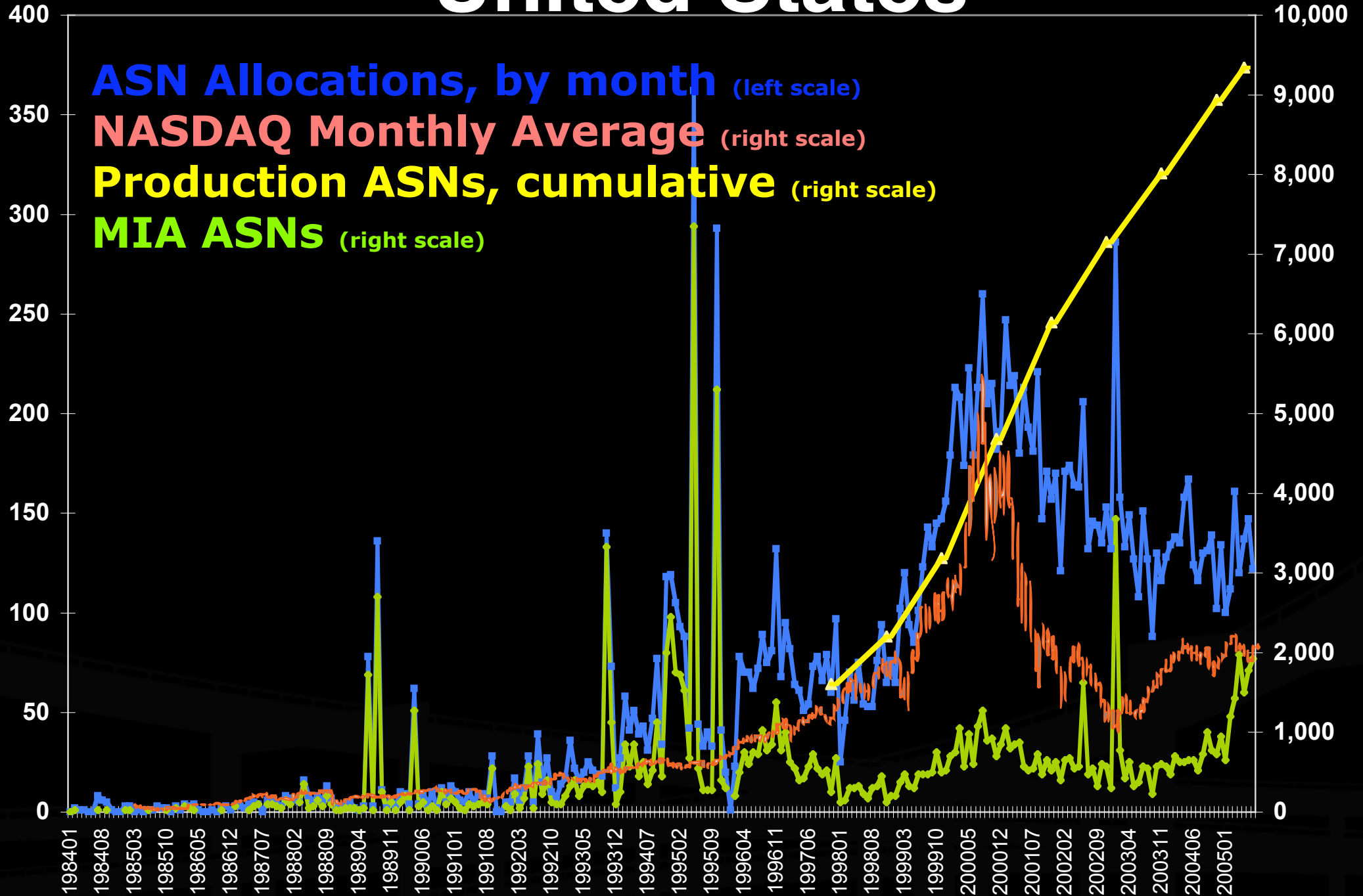
KC's "Core Innovators"	Soon...	EPS(\$)	MKTCAP(\$B)
MCIW	(MCIW- <b>VZ</b> )	-11.22	6.5
SPRNT/NXTL	(SPRNT/ <b>NXTL</b> )	-0.31	69
VERIO/NTT	(VERIO/ <b>NTT</b> )	1.98	71.6
LEVEL3	???	-0.74	1.9
SBC/T	( <b>SBC</b> /AT&T)	1.41	78
QWEST	???	-0.45	7.7
COGENT	???	-7.42	0.2
GLBC	( <b>CNC</b> / <b>STT</b> )	-13.84	0.3
SAVVIS	???	-0.90	0.12
ABOVENET	???	-1.25	19.3B
WILTEL	???	n/a	n/a
TELEGLOBE	(TG/ <b>VSNL</b> )	-0.74	0.2
C&W	???	0.70	4.7B
TWTELCOM	???	-1.12	1.0
(TWARNER)	???	0.48	82
XO	???	-2.18	0.4

*How might this matter?*

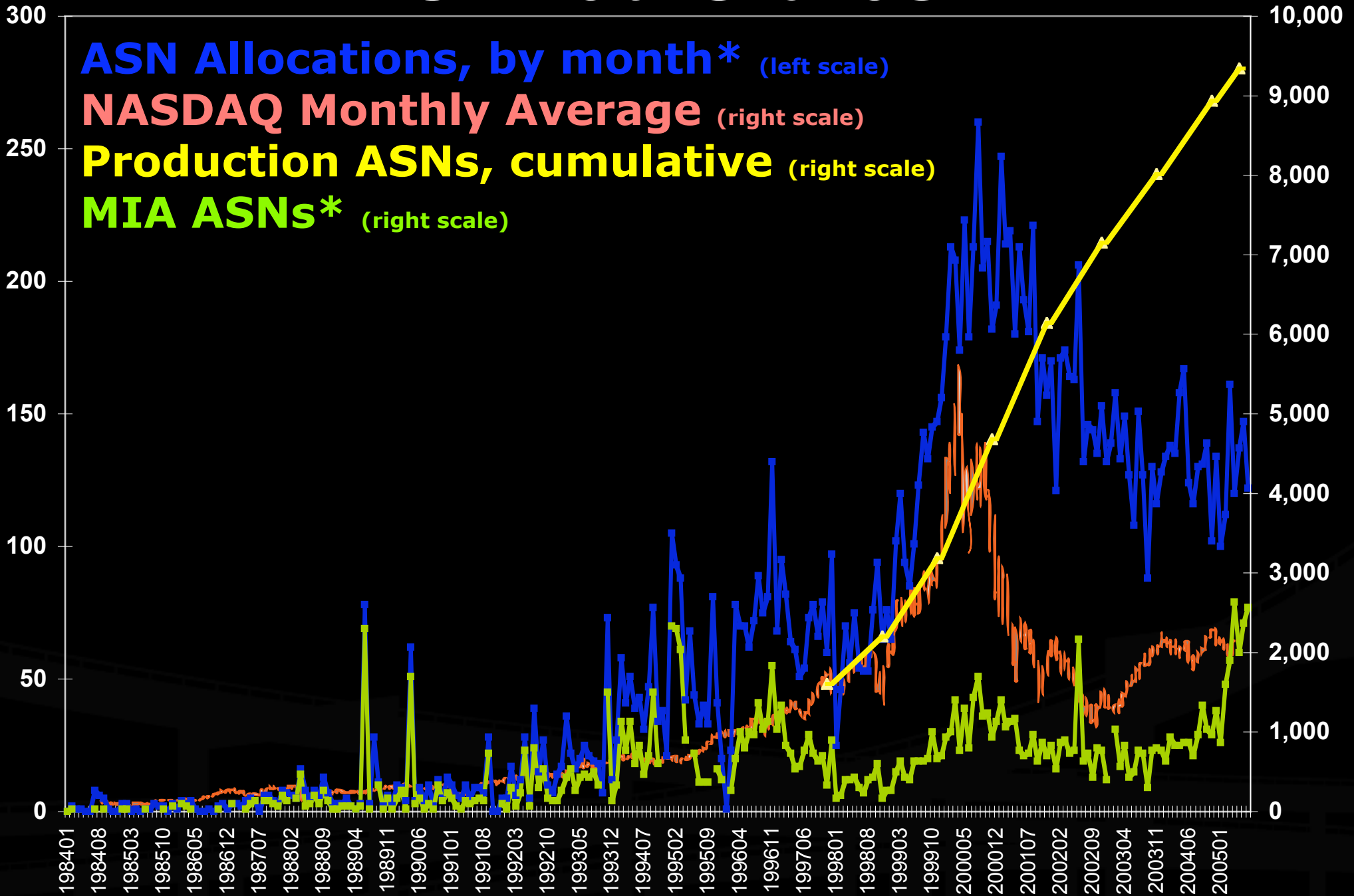
# United States



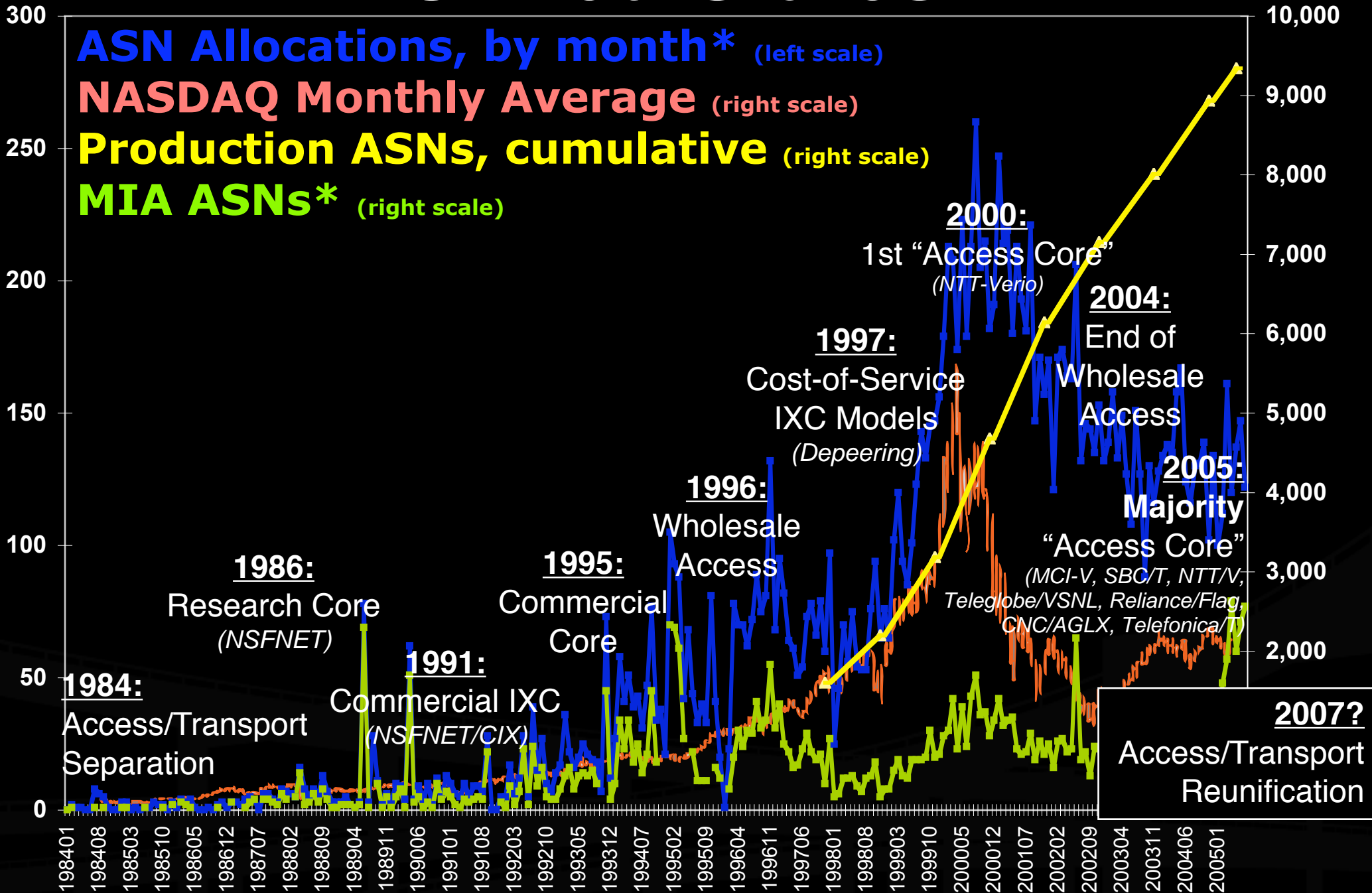
# United States



# United States

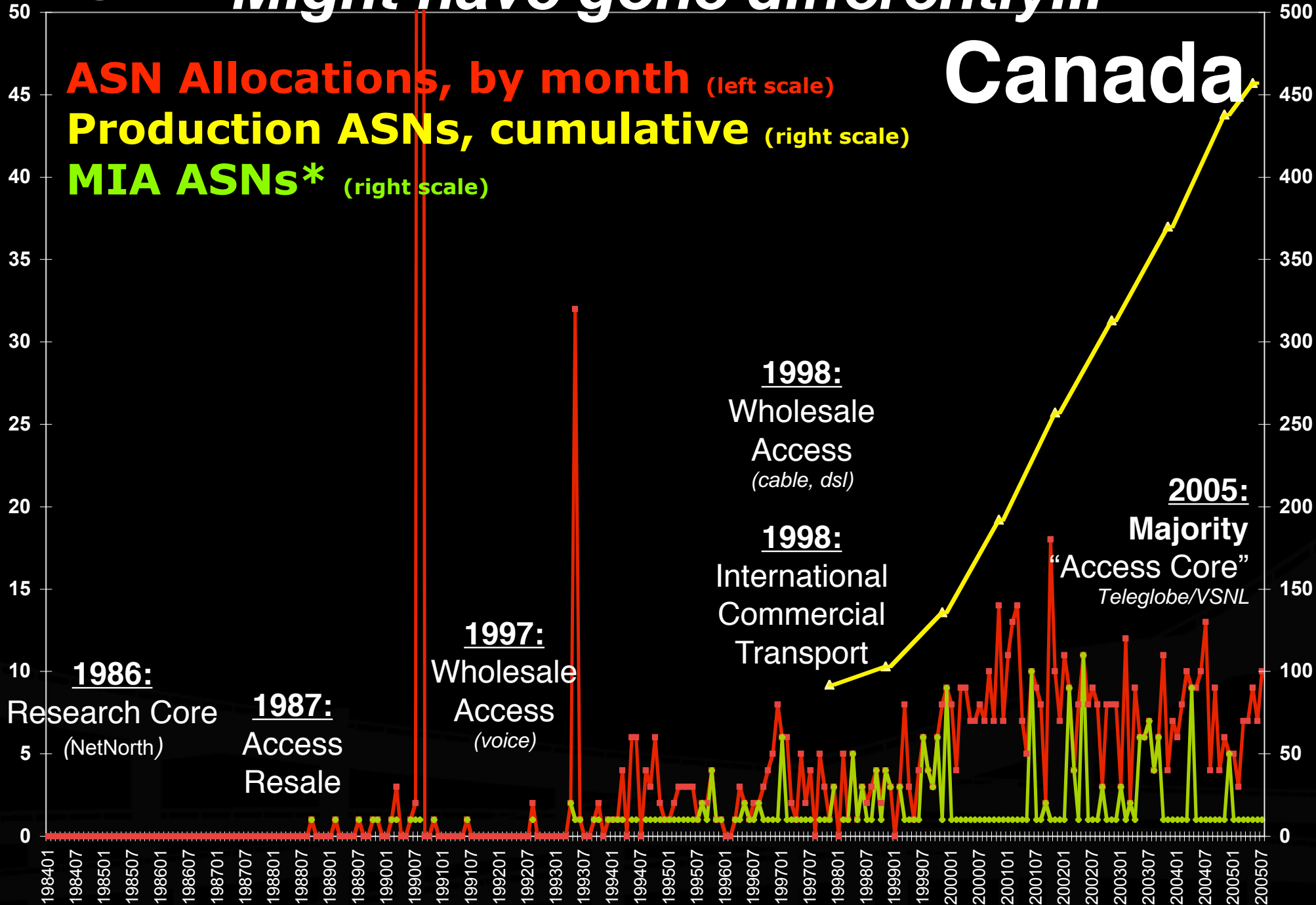


# United States



# Might have gone differently...

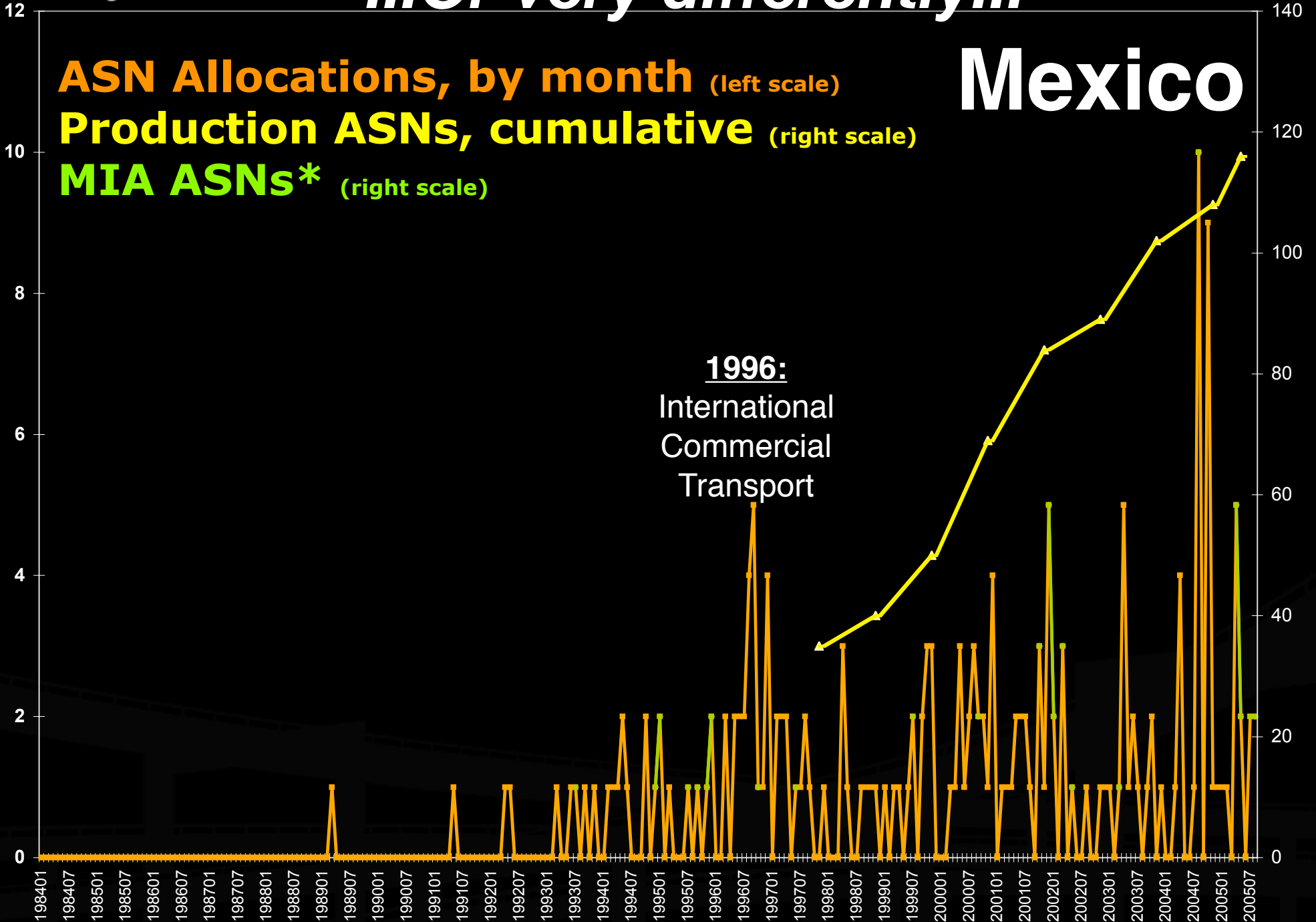
# Canada



*...Or very differently...*

# Mexico

**ASN Allocations, by month** (left scale)  
**Production ASNs, cumulative** (right scale)  
**MIA ASNs\*** (right scale)





# ASNs: Layer 3 Glue

- **Usually distance spanning**  
You had to build to reach somebody, or somebody had to build to reach you
- **Infrastructure: Big initial capex for hole diggers, relatively incremental opex per unit capacity, *forever***
- **Affordable transport -> many enterprises find many different uses -> Many ASNs, routing entries, prefixes**
- **Affordable access -> many enterprises find reasons to directly reach customers -> More ASNs, routing entries, prefixes**

# What happens when glue == ownership?

- **Exists where laws never compelled access/transport separation (many many countries)**
- **Exists where parallel facilities are not already in place (many many countries)**
- **Happens when consolidation leads to end-to-end facilities ownership...**
- **Countries like this generally associated with much fewer ASNs than their competitive counterparts...**

# Possible Implications

- **Depressed demand for both new and existing ASNs, PI address space, neutral data centers, interconnection facilities...**
- **Rising demand for HD ratios, restrictive peering, IP resource policies that benefit large operators**
- **More territorial strategies to establish fiat pricing markets**
- **Not all innovation is beneficial...**
- **A scenario that requires consideration...**

# Questions...thanks!

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**kc claffy -- twice!**

**Route Views Archive**

**The usual suspects**