

Why Internet Exchanges are even more important today!

THANK YOU

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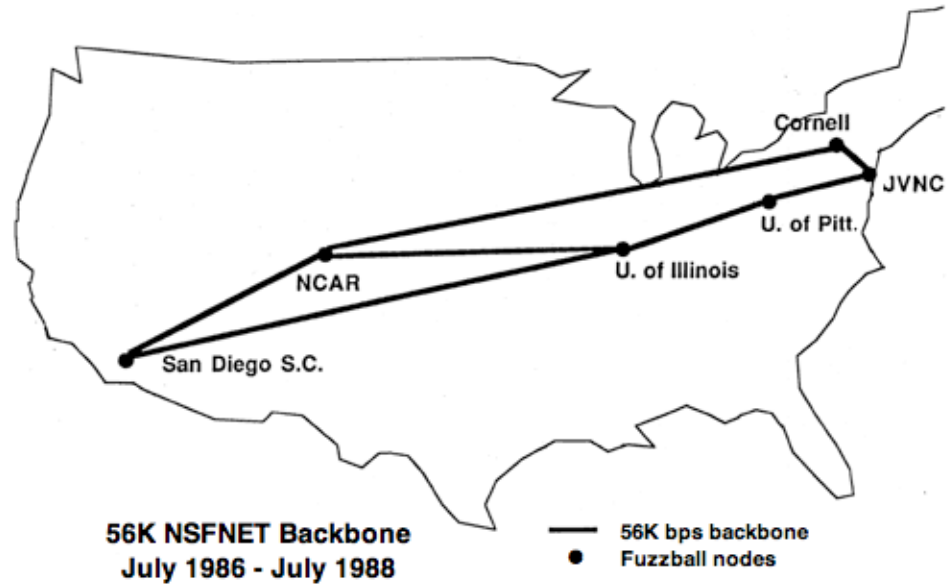
ix.br

A Brief History

NSFNET

NSFNET

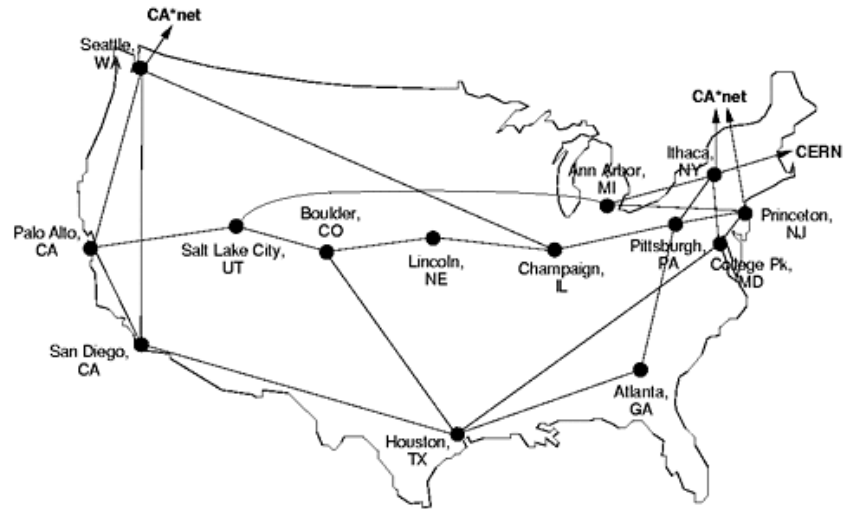
1986 Network with 56kilo bit per second links



NSFNET Grows

1988 New T1 (1.5 Mb/s) backbone

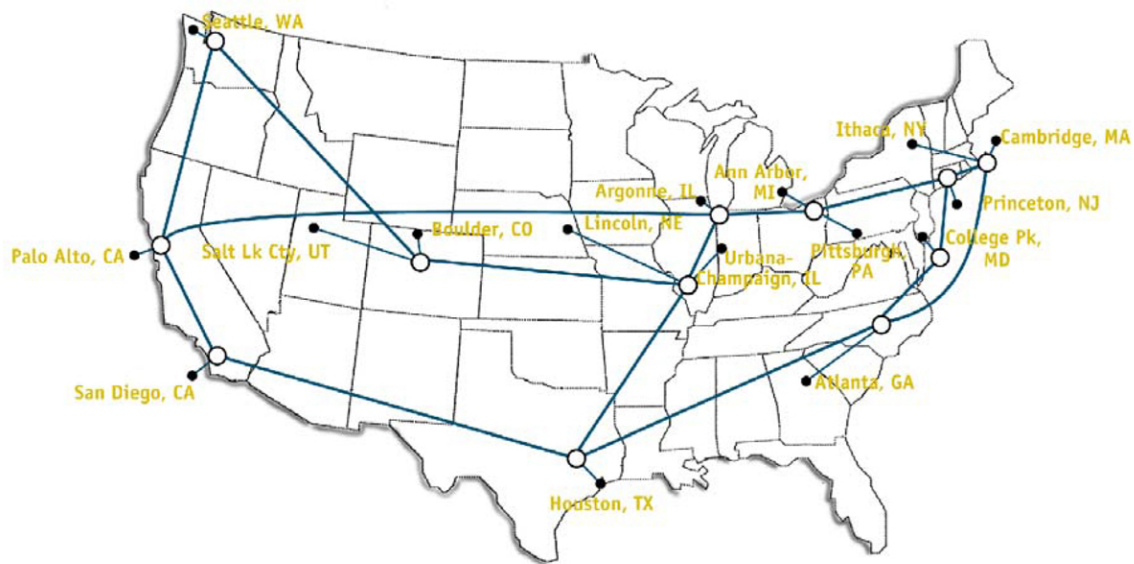
NSFNET T1 Network 1991



NSFNET Grows Again

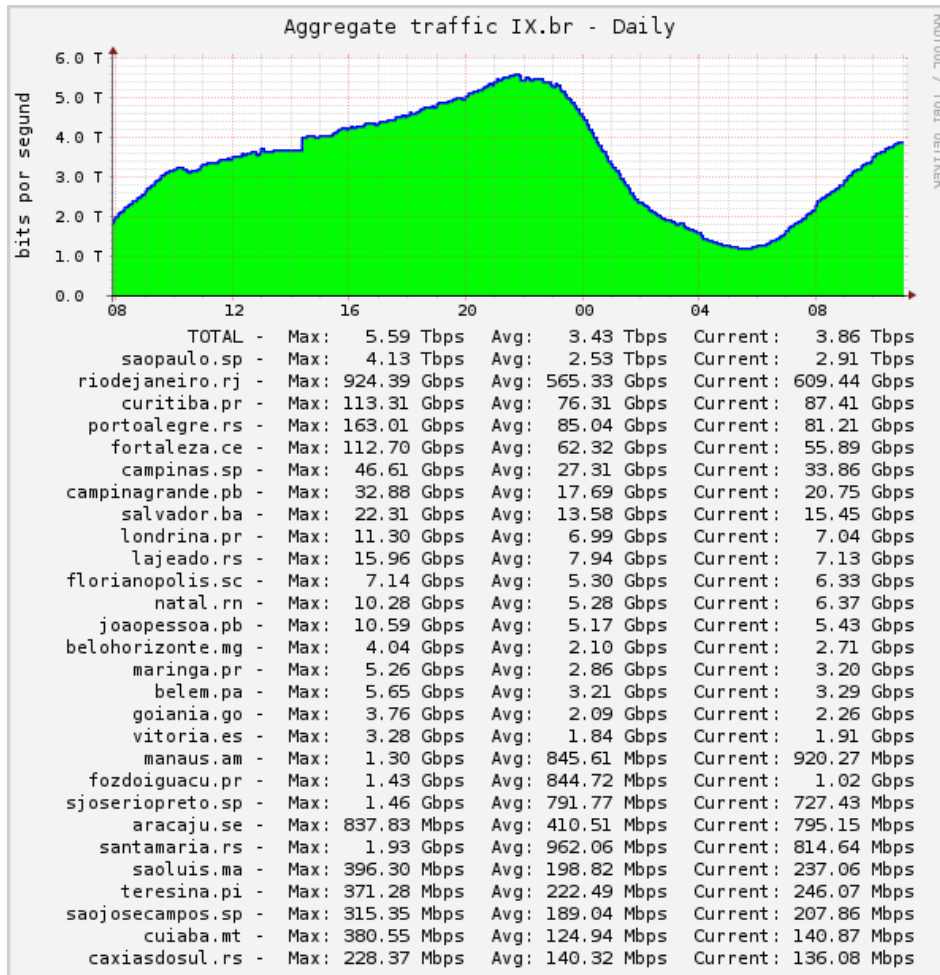
1992 DS3 45Mb/s backbone

NSFNET T3 Network 1992



As Internet becomes commercial more exchanges

- CIX (Commercial Internet Exchange)
- MAE EAST (FDDI), in a Basement Car Park Garage
 - By 1997 it was estimated that $\frac{1}{2}$ of the global Internet traffic went thru MAE-EAST
- MAE WEST (FDDI)
 - Estimated to have handled up to 40% of the global Internet Traffic
- PAIX (Palo Alto Internet Exchange)
- LINX (London Internet Exchange)
- AMS-IX (Amsterdam Internet Exchange)



5.59 TERA BITS!!!

WAY TO GO!!

Why Internet Exchanges ?

- Help keep traffic local
- Reduce the costs of communicating with other networks
- Reduce latency between networks
- Improves Customer Experience
- Improves Network Resiliency
- Improves Network Security

Peering is Personal

- It's a people decision, much more than just a technical decision
- Peering is about relationships:
 - People relationships
 - Business relationships
- Networks will not peer if the people don't like or trust the other peer.

So....

Networking is better than Not Working.

Networking People, Networking Businesses. It's a Team Sport!

Its Personal, you need a Peering Coordinator

- Since peering is so much about personal relationship....
- You need to have someone in your company that is a:

“PEERING COORDINATOR”

This Super Hero is:

Part Engineer

Part Sales Person

Part Financial Wizard

100 Percent Human

Today the Internet is changing even more

We have classic enterprises becoming “service providers”

We have mobile computers, tablets, phones, cars, toasters, coffee machines!

“There is an App” for that!.

Applications are are growing like crazy.

What was an enterprise is now a service provider

- Many companies that have operated as an Enterprise (end user to the ISP) and are now becoming Service Providers.
- Or they should start to think like one!!

Lets look at Banks

- They typically buy their Internet from a Transit provider.
- They don't usually connect to an IX.
- They have lots of customers that have mobile devices.
- Banks get attacked by cyber criminals
- Customers get mad because the banking App isn't working.

- If Banks would PEER at Internet Exchanges, many problems would go away.

THEY REALLY SHOULD CONNECT TO AN IX!

Enterprises benefit by peering

- Improved Network Security
- Improved Network Resiliency against
 - DDOS
 - Holiday Shopping (or is that also a DDOS ?? 😊)
 - Network outages
- Better Customer Experience, Happier Customers

Internet Exchanges are CRITICAL PLAYERS

- IX's are critical players to the every growing consumption of online access.
- Mobile users will want quick access to their Apps and data
- 5G Networks and the new Apps will require less latency

- IX's will play a greater role in regional Internet Stability and Security.

- IX.BR, one of the top IX's in the world is critical to region, and even the global Internet
- IX.BR and other IX's have done a great job of helping the Internet grow in their regions!

Regional Internet Exchanges are a critical part of a

Vibrant

Thriving

Internet Community

QUESTIONS / DISCUSSIONS ??