# JET Roadmap Workshop

## Opening Plenary

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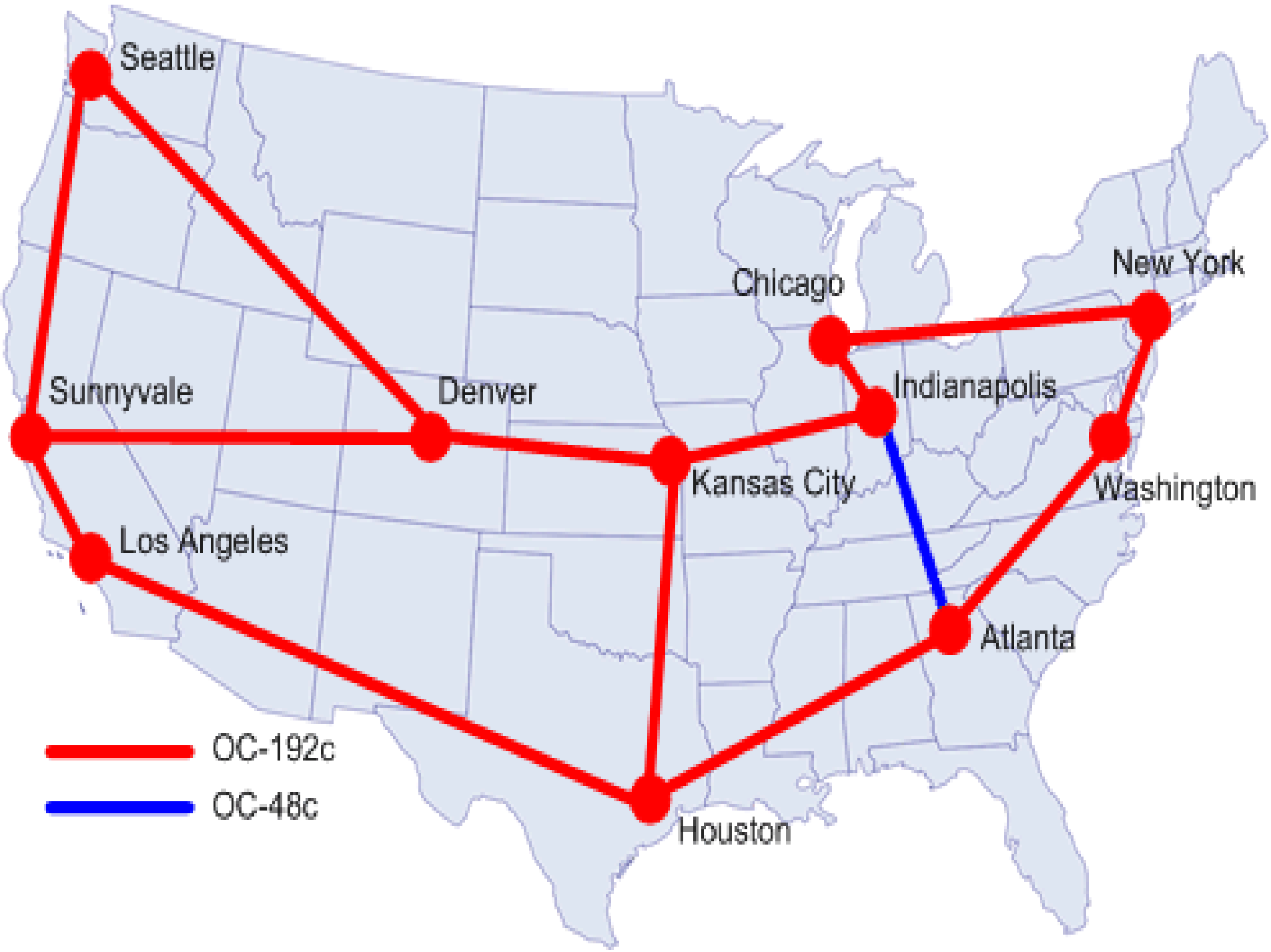
# Overview

- Technology Push
- Programmatic / Application Pull
- Challenges for the JET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# Technology Push

- Low incremental per-lambda-mile cost
  - not low first-lambda cost
  - not steadily increasing b/s rate per lambda
- More kinds of switches to know about
  - disciplined router design
  - (multi)gigabit Ethernet switches
  - circuit switches
- Necessity to include 'security'
  - why is this technology push?

# Programmatic / Application Pull

- End-to-end 10-Gb/s flows common
  - Dependable performance
  - File transfer a very common theme
- Wide-area flows common
  - Combining high-speed and wide-area will be key
- Application innovation will continue
  - Human-human communication one key theme
- Textured Trust
  - No damn firewalls in key paths
  - Simultaneous need for protection from attacks

- We have so much to learn
  - How to sustain high-speed flows over wide areas
  - How to support textured trust
  - How to support 'performance seamlessness'
  - How to support dependable performance
- Circuit services will be problematic
  - PSTN agreed on the 64kb/s DS0 as lingua franca
  - Data applications need broad range of b/s rates
- We heap scorn at bell heads
  - Our experience at circuit services is thin

# Challenges for the JET

- Serving the university / lab community
  - we know how to deliver seamless connectivity
  - we will learn how to deliver seamless performance
- Managing Uncertainty
  - what will the technology mix be in 2007?  in 2009?
  - reduce risk to effectiveness due to uncertainty
- Managing Turmoil
  - complex sequence of transitions on path to that (uncertain) technology future
  - reduce risk to effectiveness due to turmoil


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