



# *IPv6: The New Internet Tidal Wave*

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**IPv6: The True Internet**

# Policy speech

- Prime Minister, Yoshiro Mori
- Sep. 21, 2000
  - I shall boldly address the diverse range of issues we face, including the early realization of e-government, the computerization of school education and the development of systems compatible with the integration of communications and broadcasting, on the basis of discussion in the IT Strategy Council. We shall also aim to provide a telling international contribution to the development of the Internet through research and development of state-of-the-art Internet technologies and active participation in resolving global Internet issues in such areas as **IP version 6 (IPv6)**.
  - <http://www.kantei.go.jp/foreign/souri/mori/2000/0921policy.html>

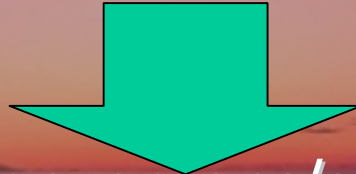


**IPv6: The True Internet**



# Why do we need IPv6?

- **IPv4: Internet is for all computers in the World**
  - IPv4 could support the number of Computers
- Internet is for Everyone!
  - We need scalable infrastructure!



- **IPv6: Internet is for everyone/everything in the World**
  - Automobiles, Appliances, Sensors, etc...
  - Human
  - Global address/No-dialups
- Technical requirement
  - Huge (unlimited) address
  - Security capability
  - Plug & Play
  - Mobile/Multicast

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# Japan and WIDE Project

- 100% IPv6 readiness by 2005
- Transition support for ISPs
- WIDE activities
  - KAME/TAHI/USAGI
  - IPv6 appliances
  - 6bone-jp
  - OSPFv3
  - DV over IPv6 with PIM
  - NSPIXP-6

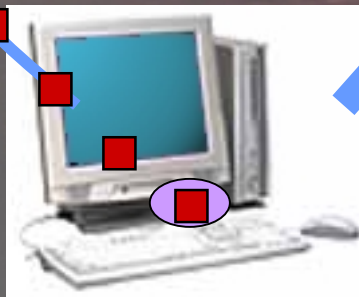
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# DV Transport System

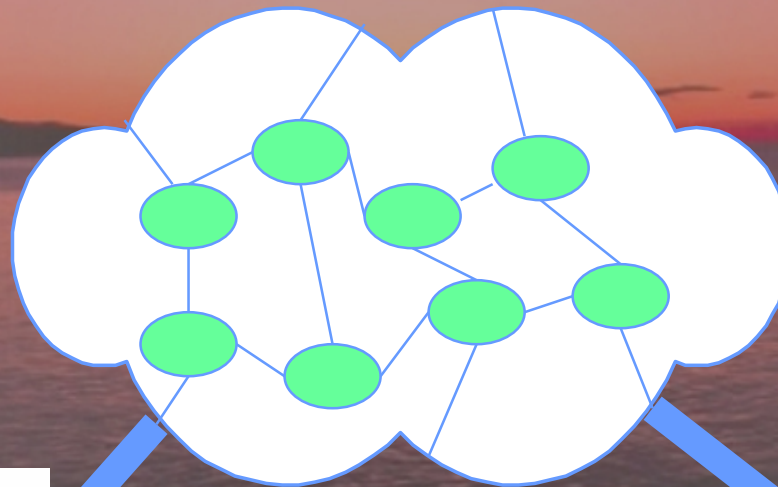
Consumer DV Camera



IEEE1394  
Cable



DV→Internet PC



Internet



Consumer DV Deck

IEEE1394  
Cable



Internet →DV PC

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# DV Transport System

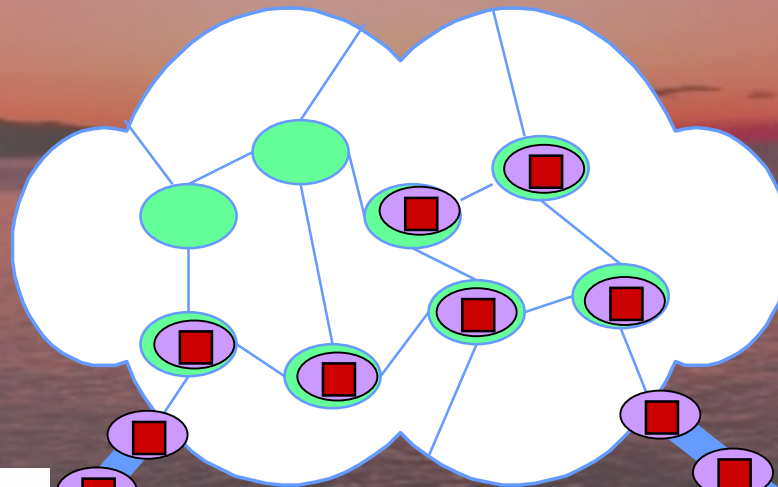
Consumer DV Camera



IEEE1394 Cable



DV→Internet PC

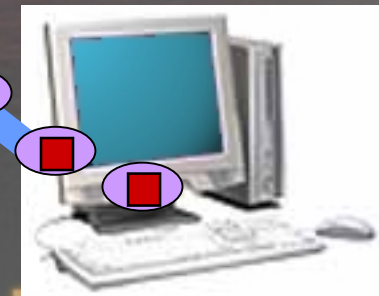


Internet



Consumer DV Deck

IEEE1394 Cable



Internet→DV PC

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# DV Transport System

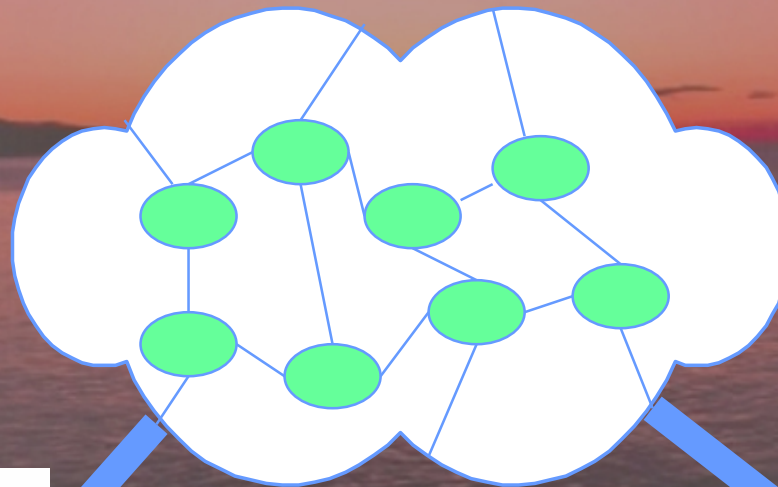
Consumer DV Camera



IEEE1394  
Cable



DV→Internet PC



Internet



Consumer DV Deck

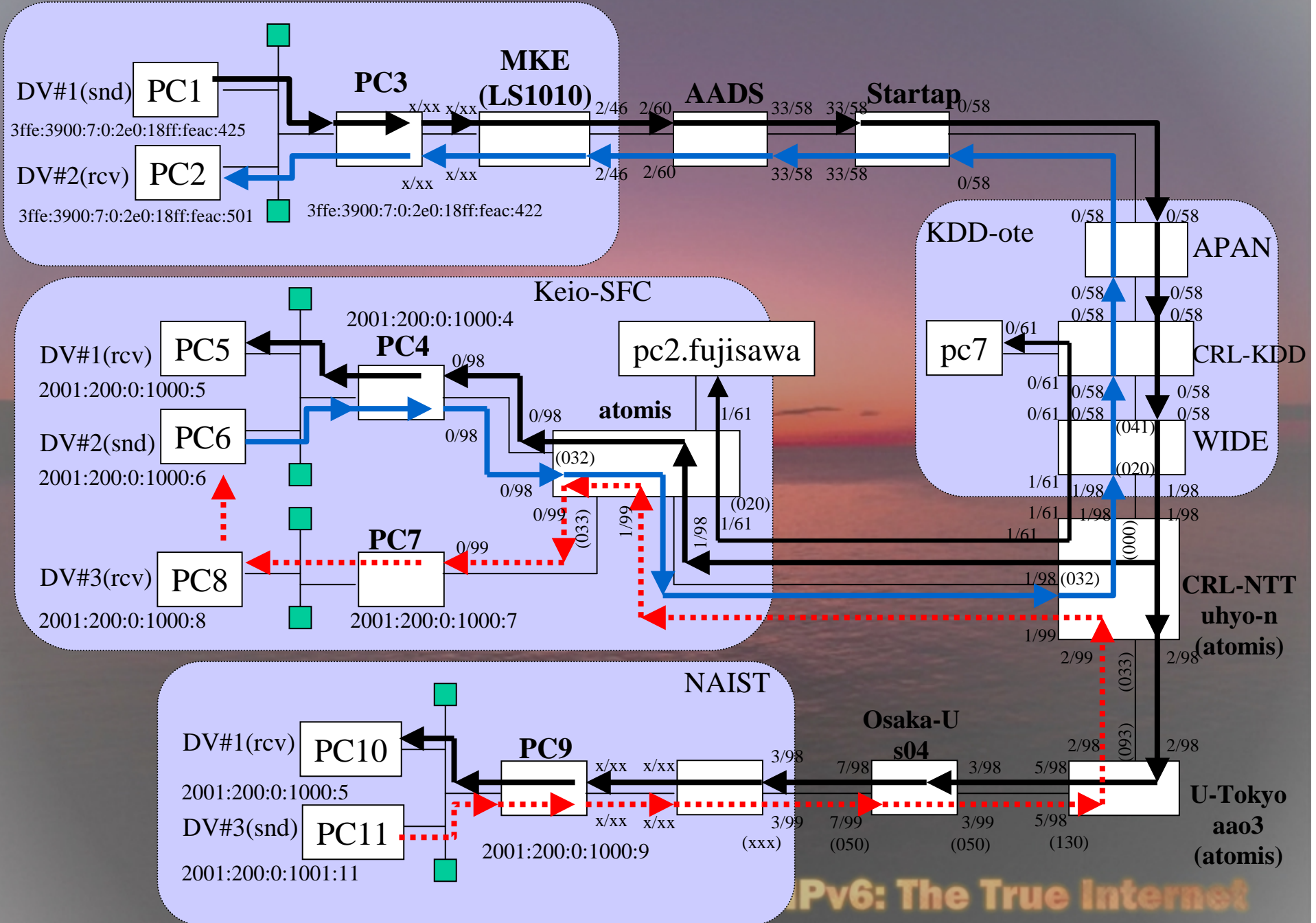
IEEE1394  
Cable



Internet→DV PC

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# U of Wisconsin



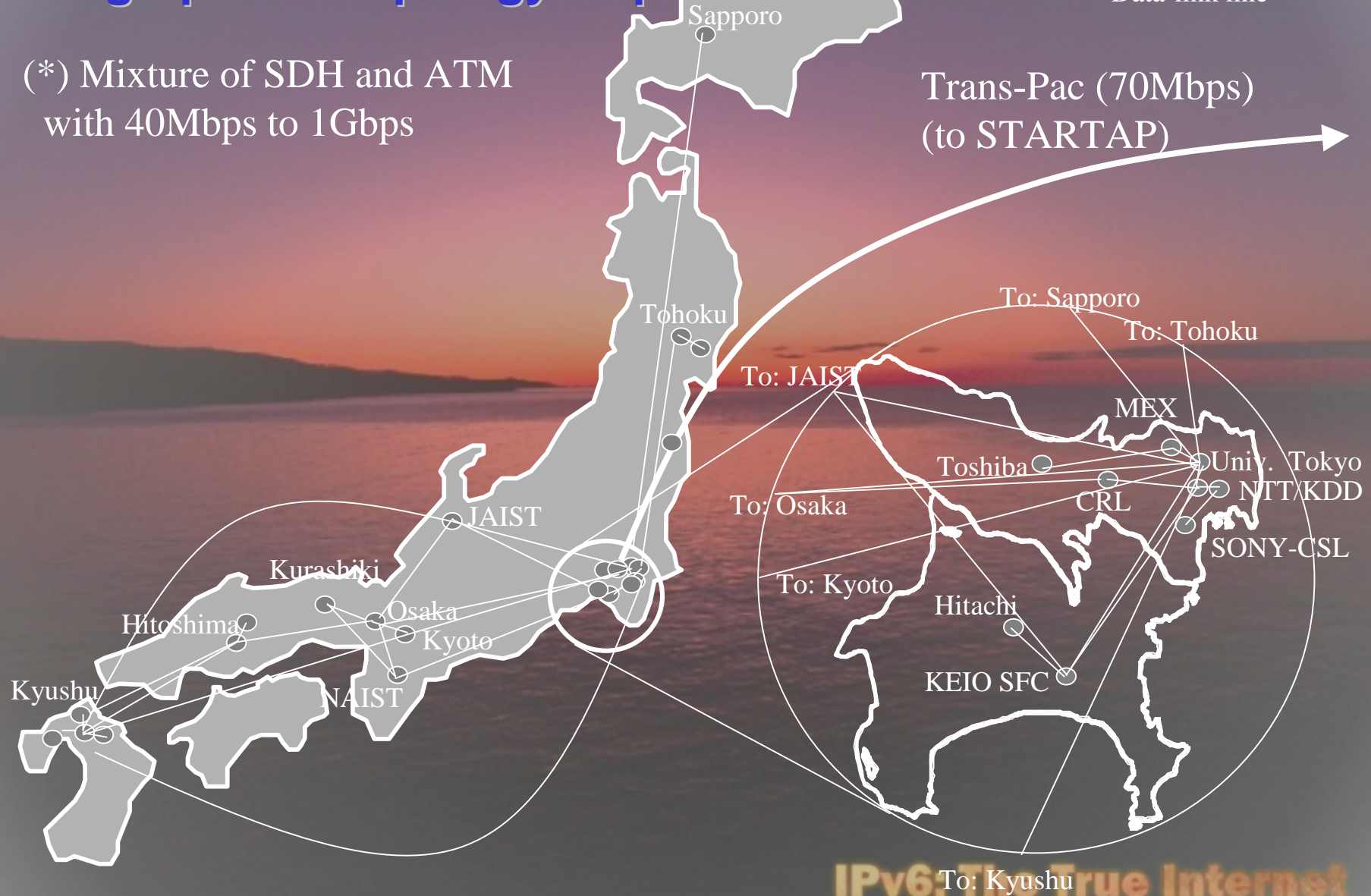
Pv6: The True Internet



# JB: Test-bed Network Geographical Topology Map

(\*) Mixture of SDH and ATM  
with 40Mbps to 1Gbps

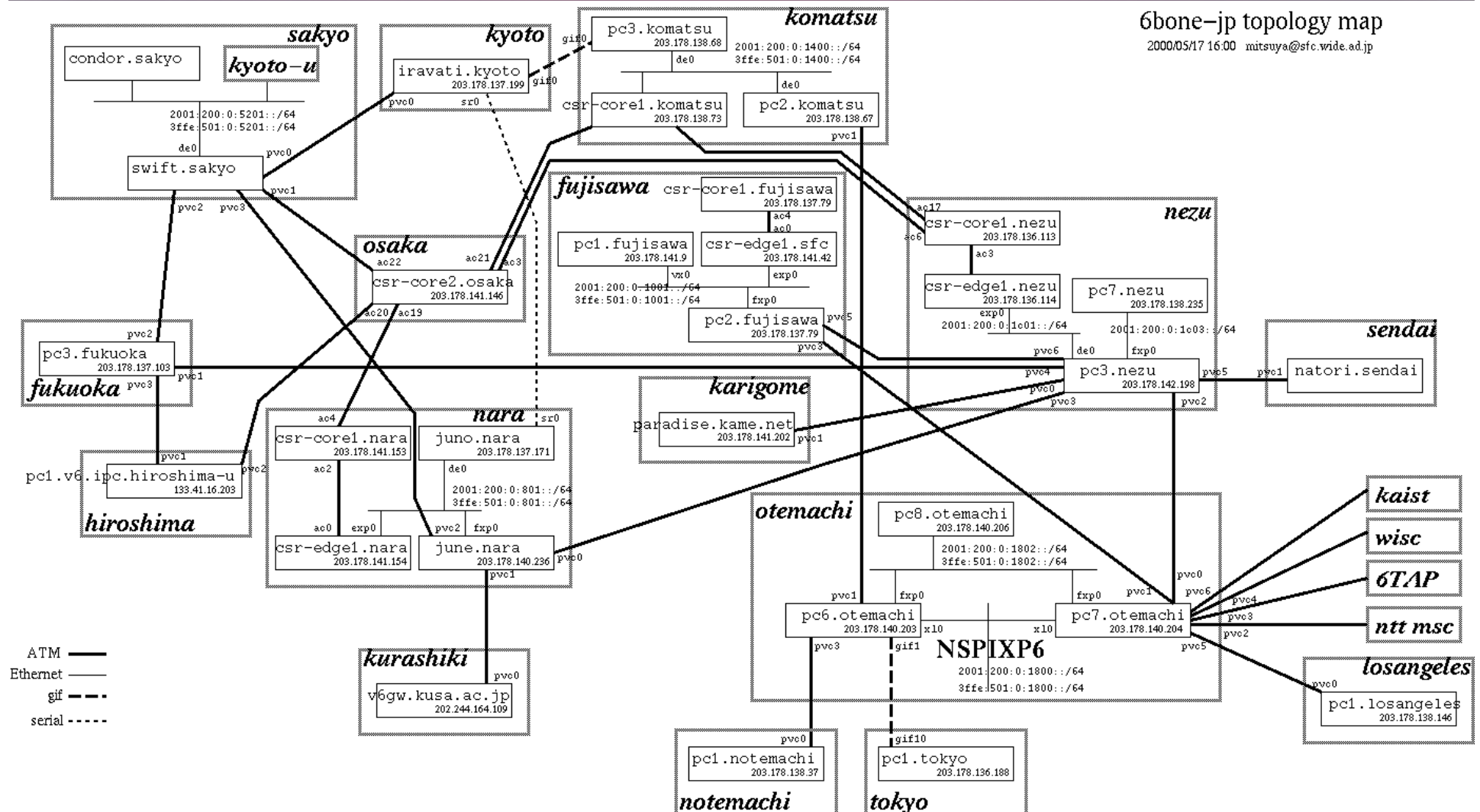
○ Connected site  
— Data-link line



# 6bone-jp topology map(2000/5)

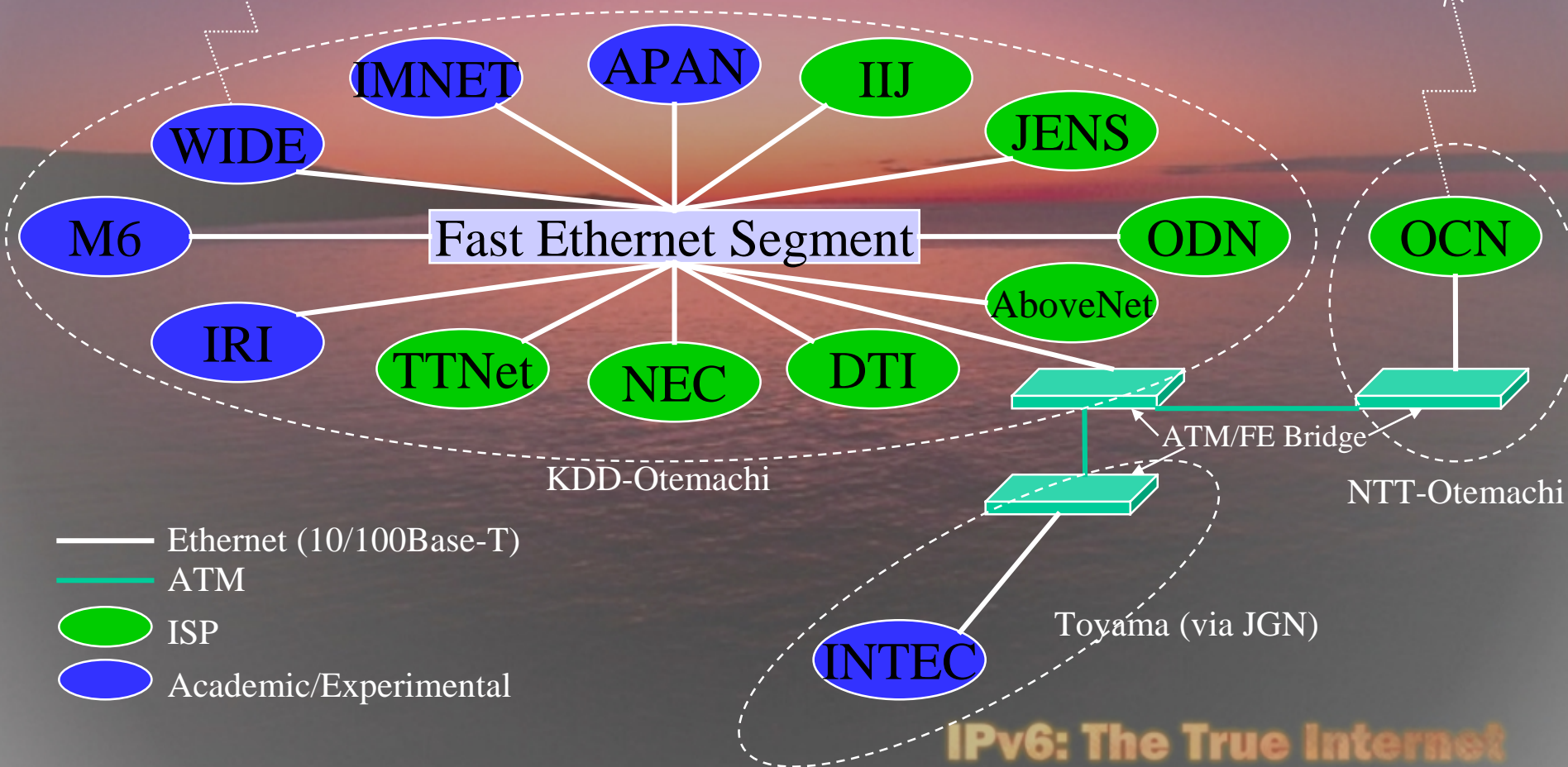
6bone-jp topology map

2000/05/17 16:00 mitsuya@sfc.wide.ad.jp



# NSPIXP-6

6TAP, KAIST, SingaREN



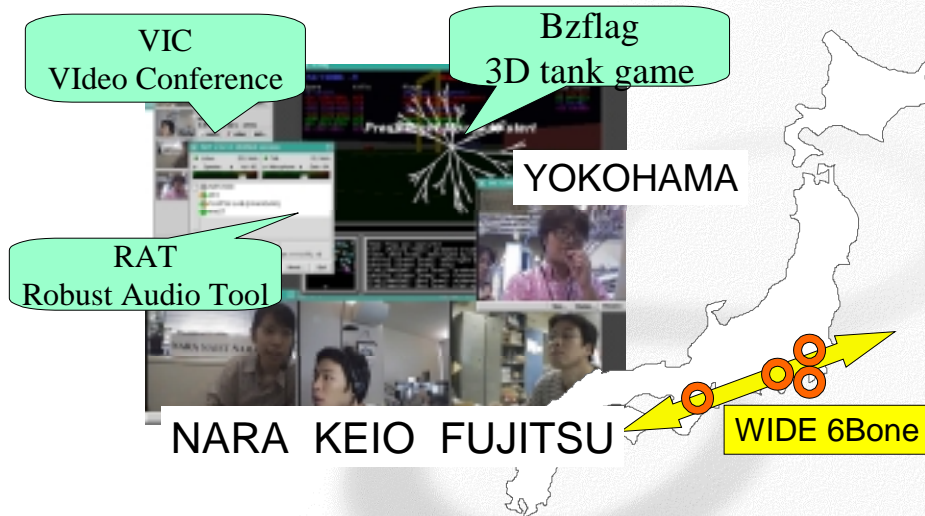


# XCAST

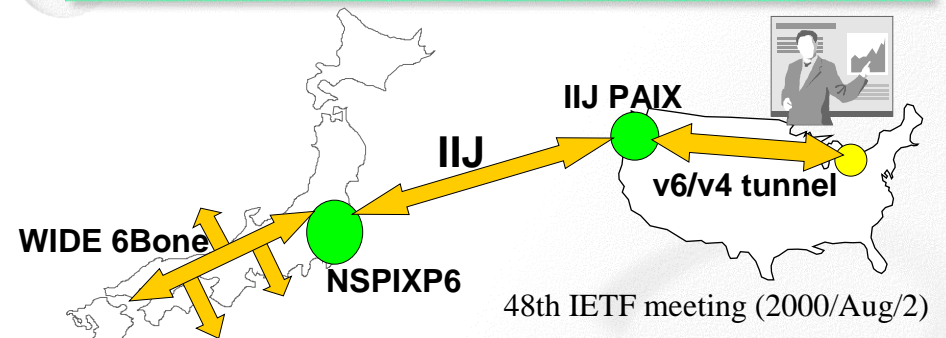
## New multicast method for small group

### INET2000デモンストレーション

IPv6 showcase (18-21 July 00)



### XCAST video trial (中継2000)

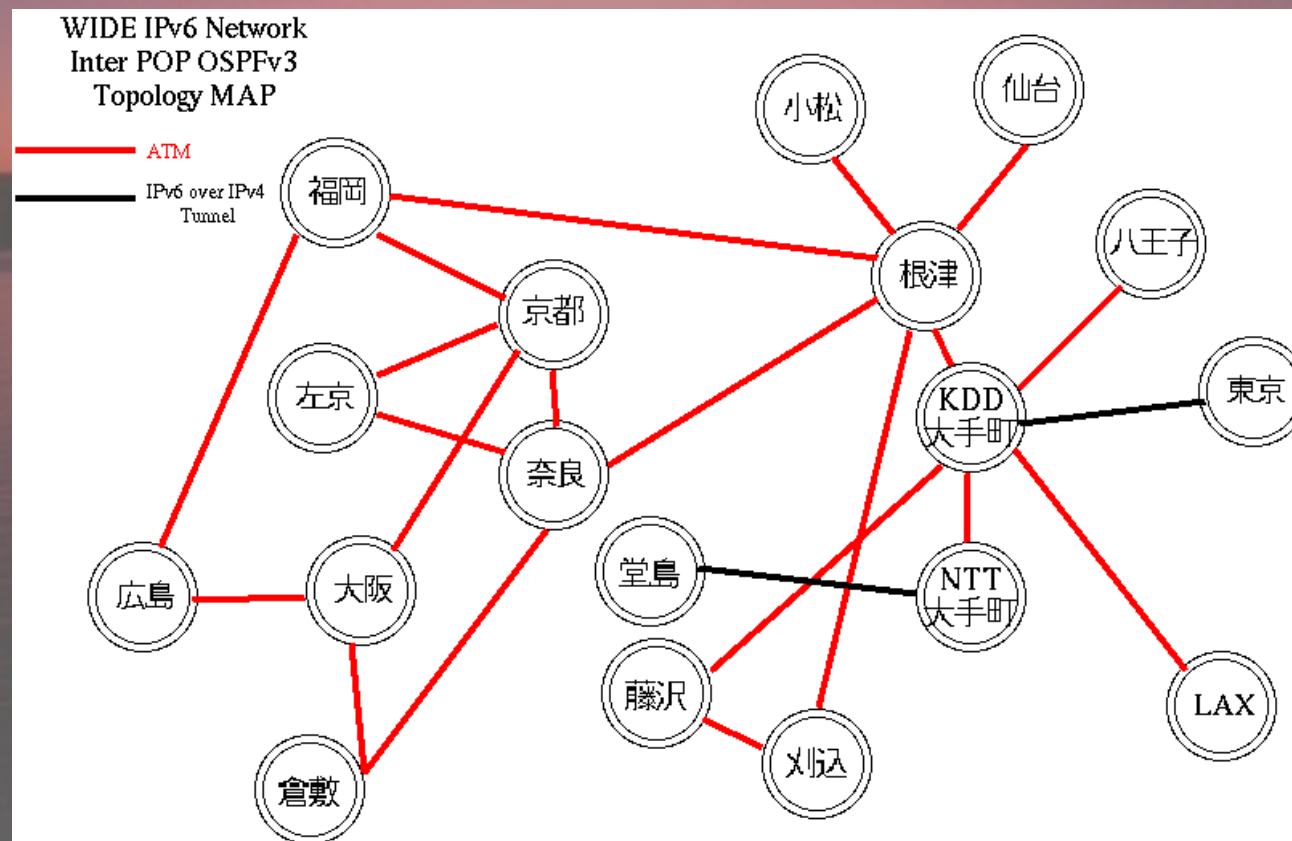


- 日本の5拠点に open plenaryを中継  
NAIST, JAIST, FUJITSU, UEC, ISID
- 双方向音声・動画像ストリーム
- Rendezvou Point(トラフィック集約点)不要
- マルチキャスト経路設定不要

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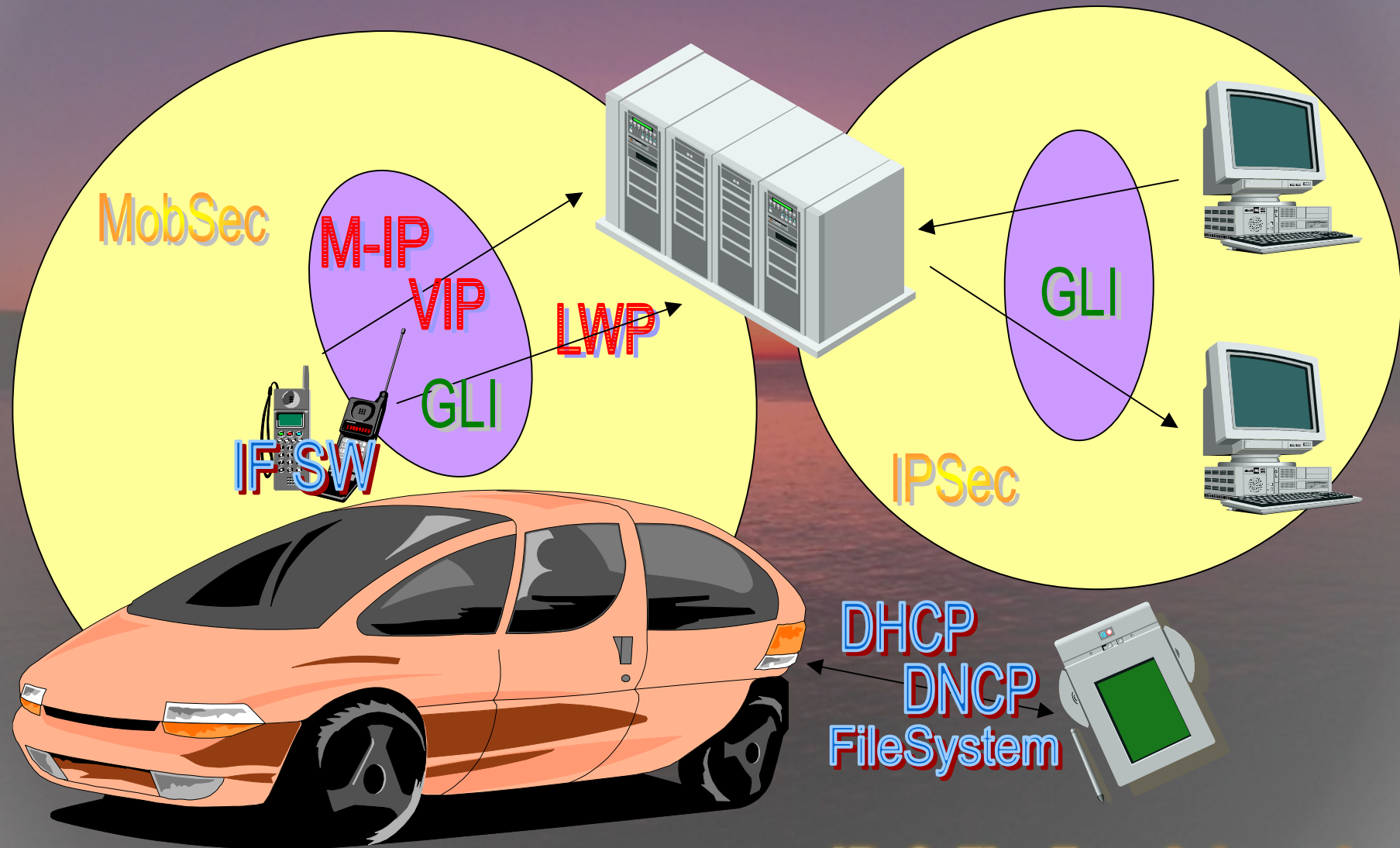
# OSPFv3 for IPv6

- Development and Experience on 6bone-jp
  - Direct feed-back to developer team



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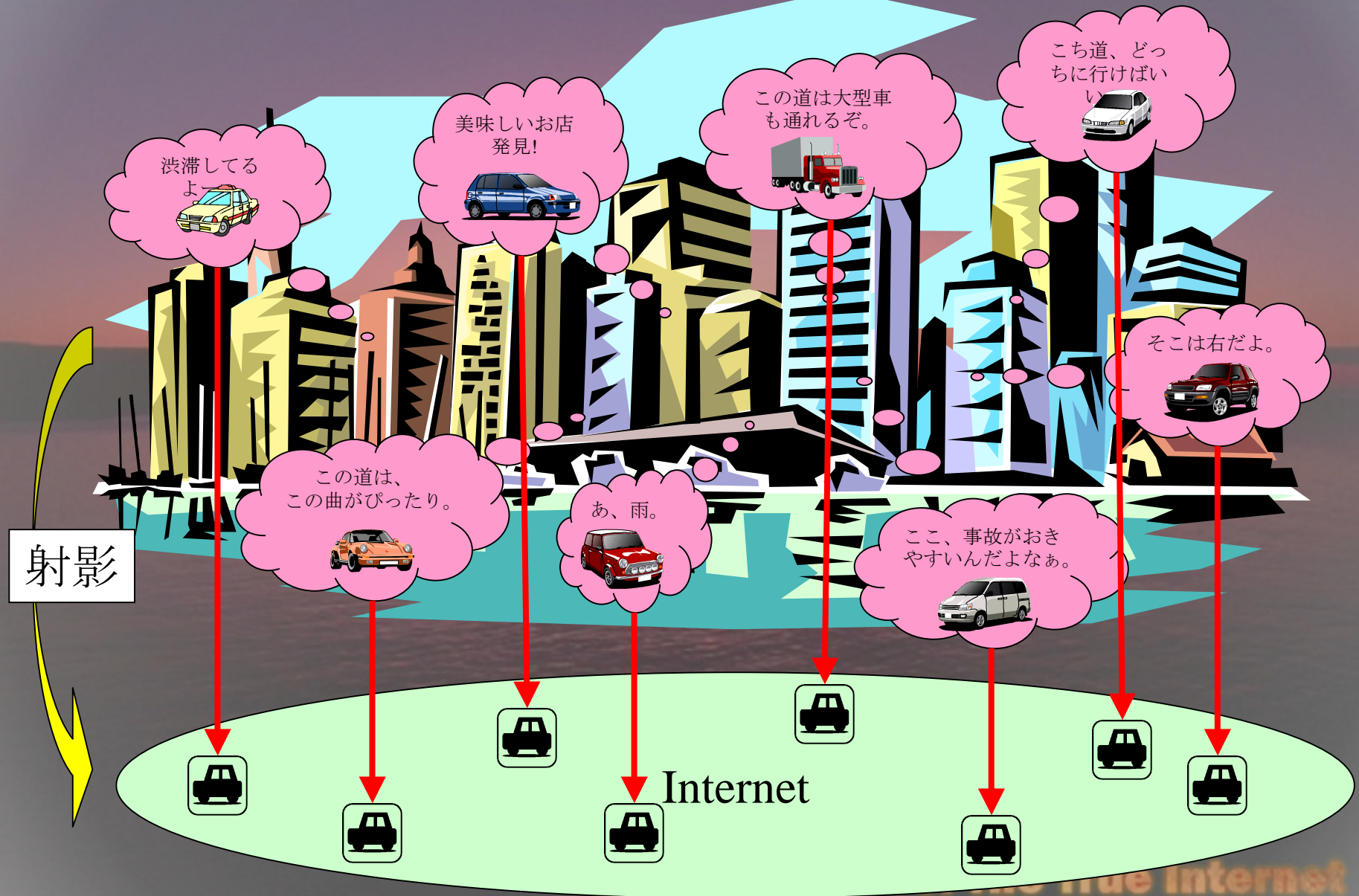
# Internet Connected Car



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# ProbeCar: Share the Information on Internet



# Everything connect on the Internet

- “Economic Effects” of the Information on the Internet
- Global unique address No dialups
- Engineer motivations



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The background of the slide is a photograph of a sunset or sunrise. The sky is a gradient of colors from dark purple at the top to a bright orange-red near the horizon. The sun is just below the horizon, creating a strong reflection on the water. The water is dark with some ripples. In the distance, there are dark silhouettes of mountains or hills.

# **IPv6 Summit @OSAKA, JAPAN**

## **December 18 and 19, 2000**

**IPv6: The True Internet**