JPIX "Updates" APNIC25/APRICOT2008

Japan Internet Exchange Co., Ltd.

Establishment of JPIX *in July 1997*

◆ Necessity of commercial IX
  - Joint venture invested by major ISPs in Japan

◆ To provide reliable interconnection Environment
  - 24Hr / 365days monitoring and operation
  - Collocation service

◆ To provide value added services
  - Statistics of our customer traffic
  - Route Server/Route Registry(Routing Confirmation)
  - Route Server (Automated Peering System)
  - NTP Server

Main Services by JPIX

◆ IX ports
- - 10Gigabit Ethernet port (10Gbps)
- - Gigabit Ethernet port (1Gbps)
- - Fast Ethernet port (100Mbps)
- - Link Aggregation

◆ Remote access
   FE, GbE, Dark Fiber

◆ Collocation Service
   To provide a full rack for customer ISPs routers

◆ In-house cabling

Optional Service (Free of Charge of course)

- ◆ **Route Confirmation Service**
  - provides route comparison with IRR database
- ◆ **Route Exchange Service**
  - ▪ provides routes that connects to RS automatically
  - ▪ Free of charge
  - ▪ no need of peering negotiation
- ◆ **NTP Server connection**
- ◆ **Net News Server**
- ◆ **snmp traffic counter measurement for each customer**
- ◆ **sFlow traffic analysis page for customer**
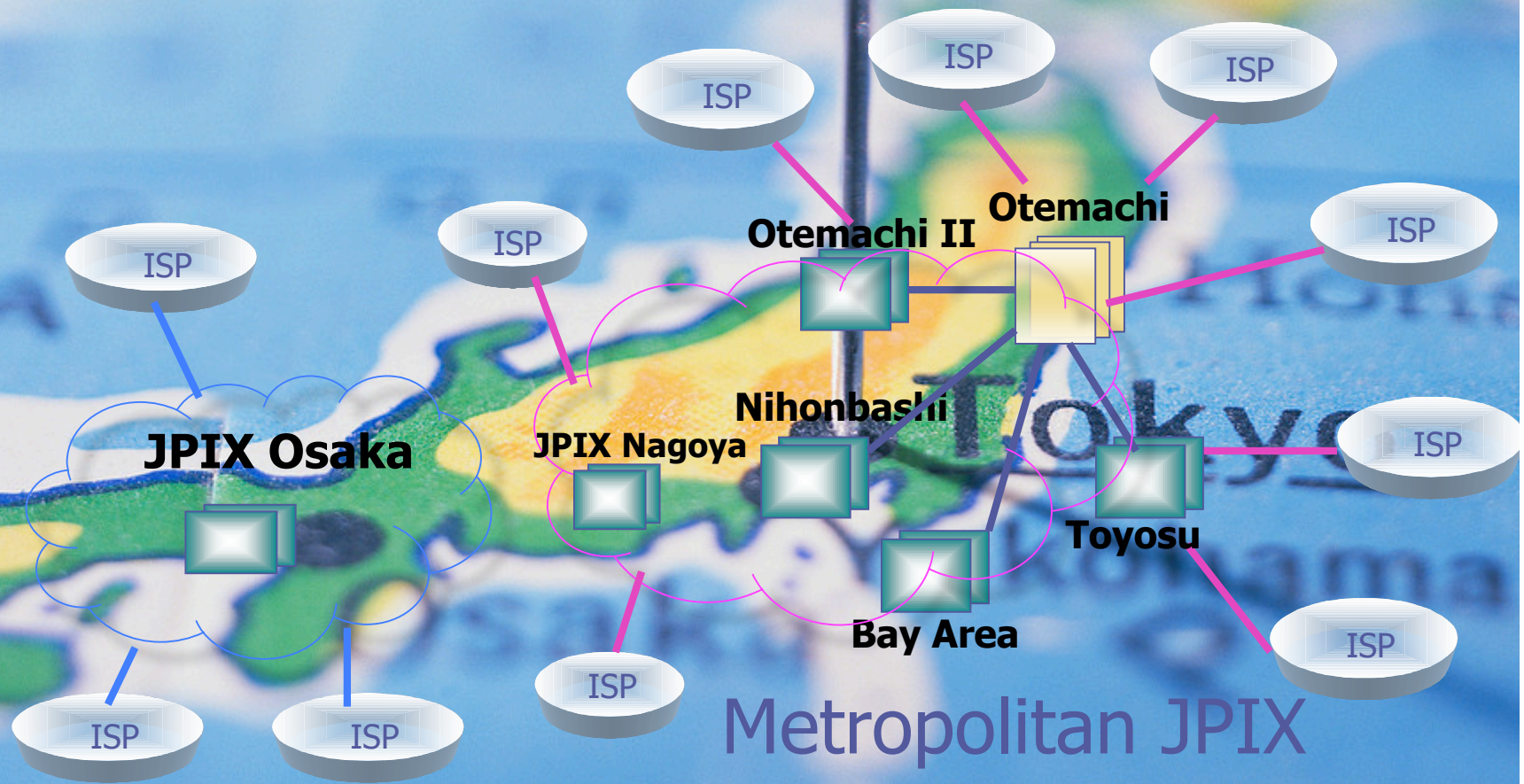
Expansion of JPIX

◆ **Metropolitan JPIX**

- To install IX switches in metropolitan area as distributed IXs
- JPIX Otemachi（MainSite): from July, 1997
- JPIX BayArea:　　　　from December, 2000
- JPIX Otemachi II:　from November, 2001
- JPIX Toyosu:　　　　from May, 2002
- JPIX Shibuya:　　　　from July, 2002; closed October, 2006
- JPIX Nihonbashi:　　from April, 2004
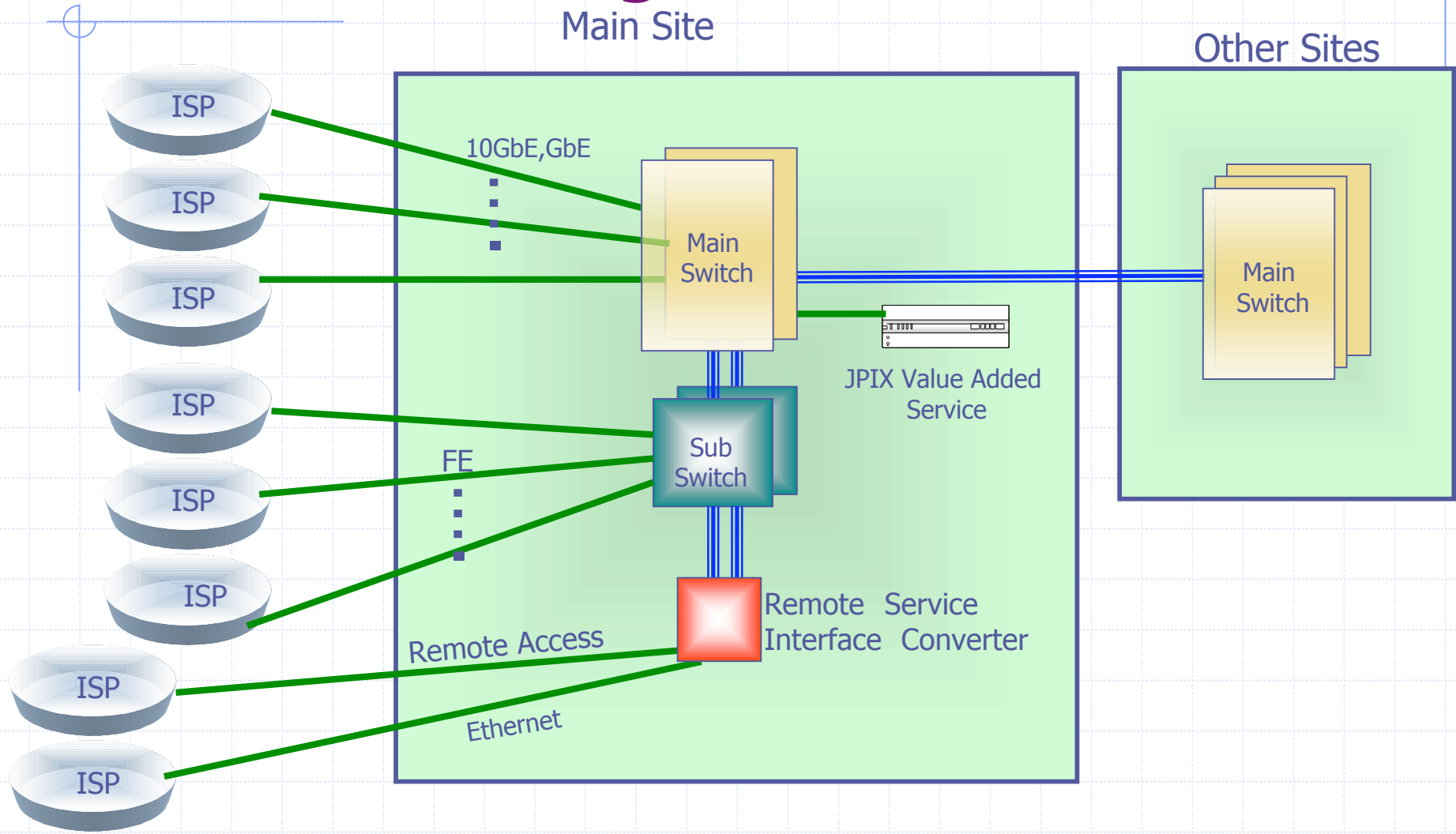
◆ **Regional JPIX**

- To install a local IX switch and/or a circuit concentrator
  connected to Metropolitan JPIX
- JPIX Nagoya:　　　　from April, 2001
- JPIX Osaka:　　　　from April, 2002

Expansion of JPIX

Tokyo-Nagoya ≒ 400Km(250Mile)
Tokyo-Osaka ≒ 550Km(340Mile)

Otemachi

Otemachi II

Nihonbashi

JPIX Osaka

JPIX Nagoya

Toyosu

Bay Area

Metropolitan JPIX

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ISP

Network Configuration

Main Site

Other Sites

ISP

ISP

ISP

10GbE,GbE

Main
Switch

Main
Switch

JPIX Value Added
Service

ISP

ISP

FE

Sub
Switch

ISP

Remote Service
Interface Converter

ISP

Remote Access

Ethernet

ISP

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IPv4/IPv6 Dual Stack IX Service 1 (projection)

- ◈ **Background**
  - ■ Experimental Service(2002.Jan～）: use dedicated switch as Native v6, 11% of customers attended
  - ■ Evaluation: easy to operate switches but sophisticated tools are needed
  - ■ Voices from customers : make it dual, meet the needs of various port configuration

- ◈ **Commercial Dual Stack IX Service is scheduled to be achieved in cooperation with Intec NetCore (2008.8～)**

# IPv4/IPv6 Dual Stack IX Service 2 (projection)

◆ **Conformance Test for Dual Stack System (Now Starting)**

- Switch performance
- Management system
- Route servers
- Traffic statistics (sFlow)
- Traffic control
- IP addressing
- Configuration of major vender's routers

◆ **Toward Dual Stack IX BCP (Best Current Practices)**

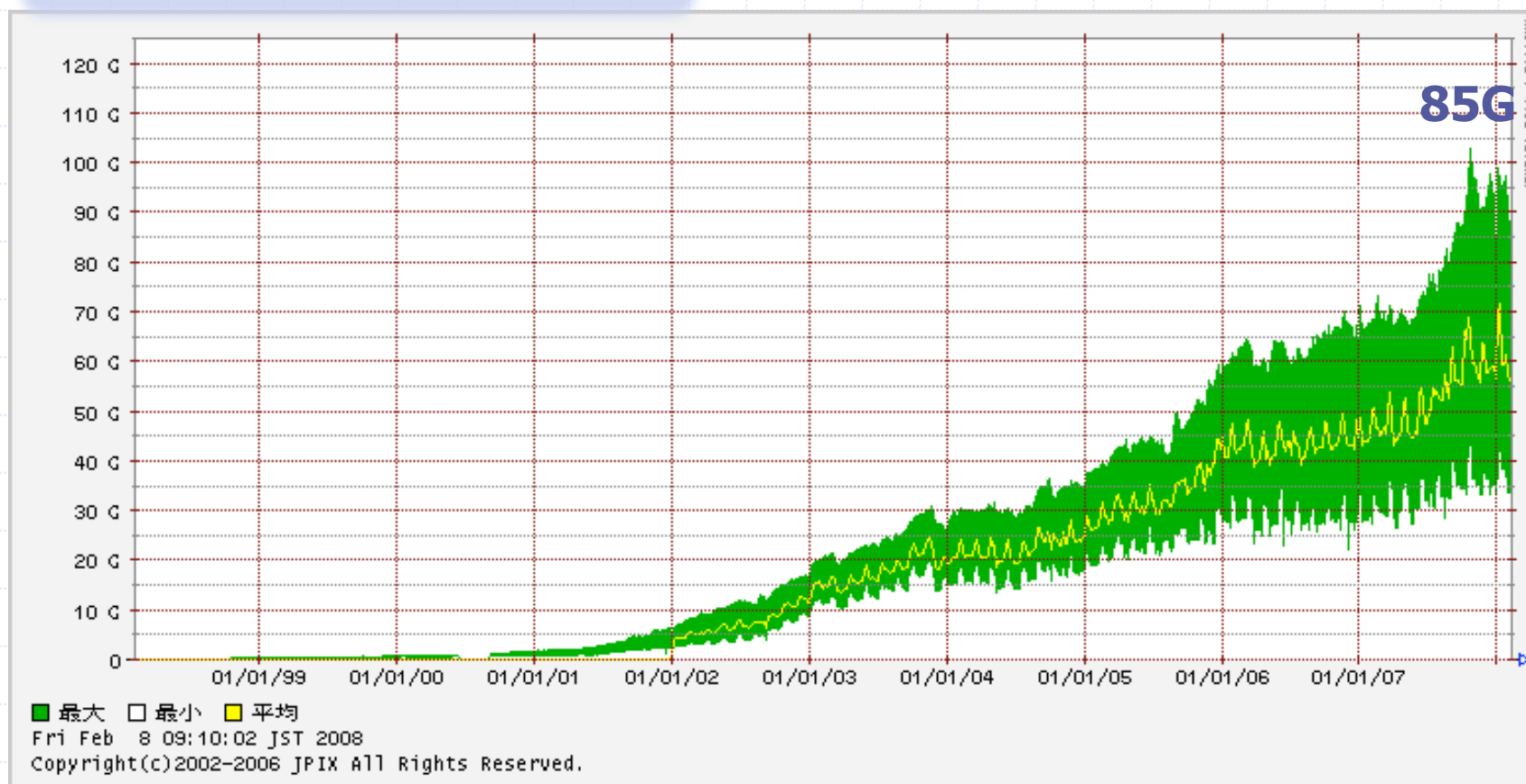- As IX operator's useful reference, we are going to make the dual stack IX BCP based on this results.

Traffic Viewer
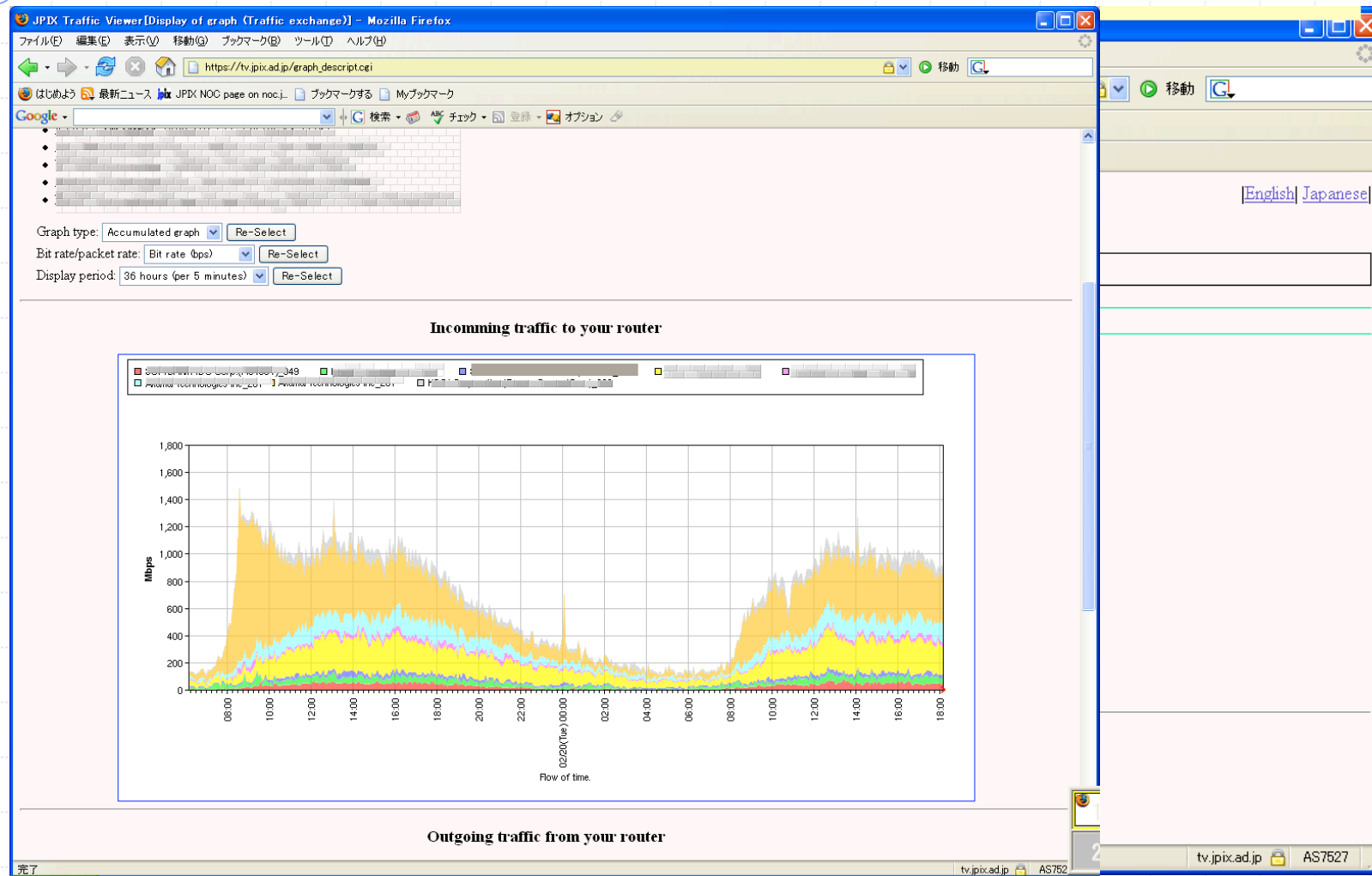
Traffic Volume

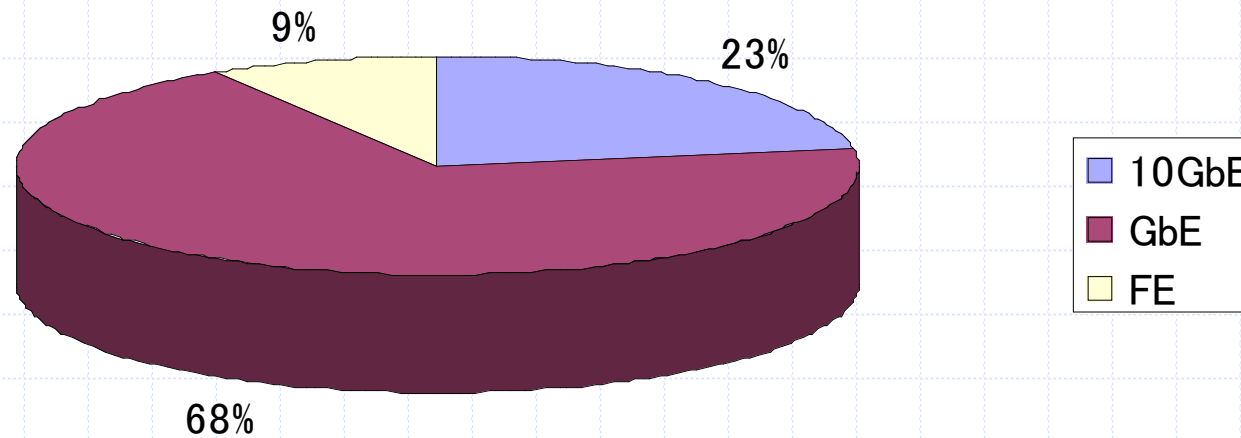IX backplane Max/Min Traffic

February 08, 2008

JPIX customers and ports

(Feb. 2008)

◆No. of customer ISPs : 115

JPIX Port Ratio(Member Ports Only)

9%

23%

68%

Legend:
- 10GbE
- GbE
- FE

What's Next

- ◆ **Implementation of 4Octet-AS and IPv6 to the Route Exchange Service**
  - ▪ Will be available from March, 2008
- ◆ **IX connection using network cloud carrier service.**
  - ▪ With a cooperation of carriers, we will be providing access from all over Japan.
  - ▪ Will be available Soon
- ◆ **Optical Switch installation for resiliency**

Thank you

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