JPIX "Updates"

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**
  - ■ 24H / 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 (GbE)

◆ **Remote access**

   ATM, FE, GbE, Dark Fiber

◆ **Collocation Service**

   To provide a full rack for customer ISPs routers

◆ **In-house cabling**

IPv6-IX Experimental Service

- ◆ **History**
  - Experimental service since Jan, 2002
- ◆ **Service Conditions**
  - Port Charge: free
  - For JPIX customers only
  - Port I/F: Fast Ethernet
  - IPv6 IP address: assigned by APNIC
  - SW location: KDDI Otemachi
  - Stand alone: not dual stacked
- ◆ No. of customer ISPs connected : 16

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(Stratum1) connection**

◆ **Net News Server**

◆ **snmp traffic counter measurement for each customer**

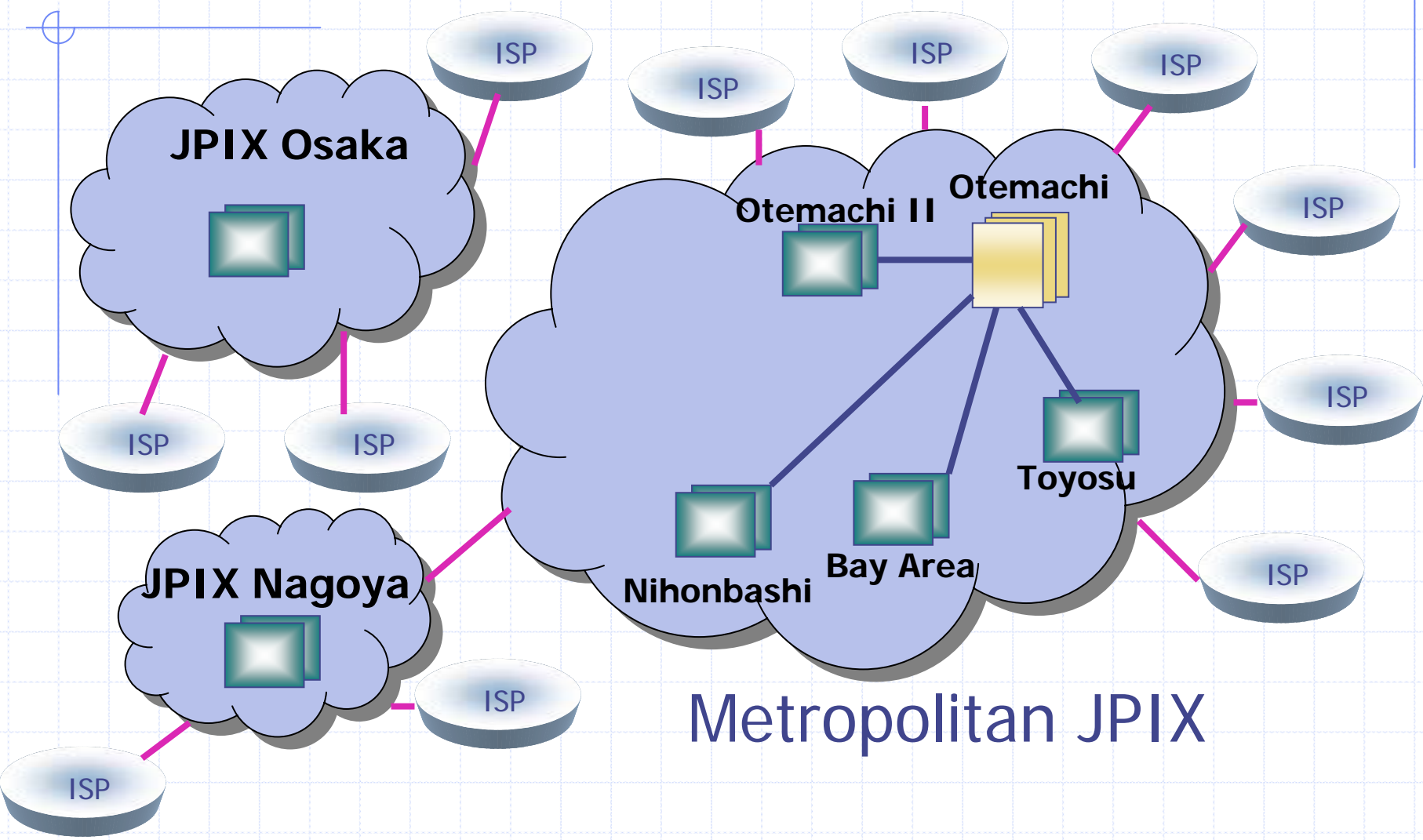◆ **sFlow traffic analysis page for customer**

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
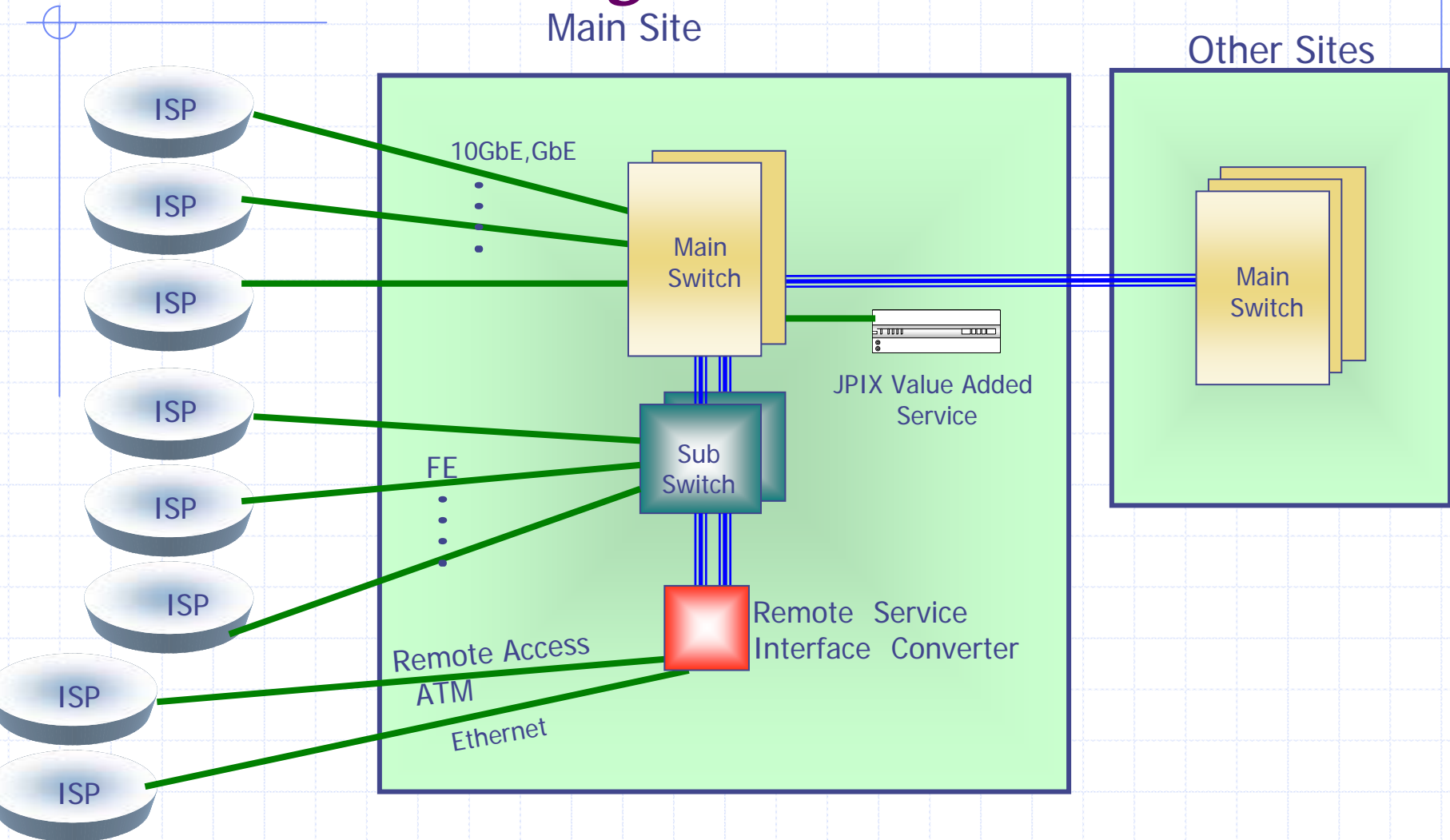- JPIX Nihonbashi: from April, 2004

◆ 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
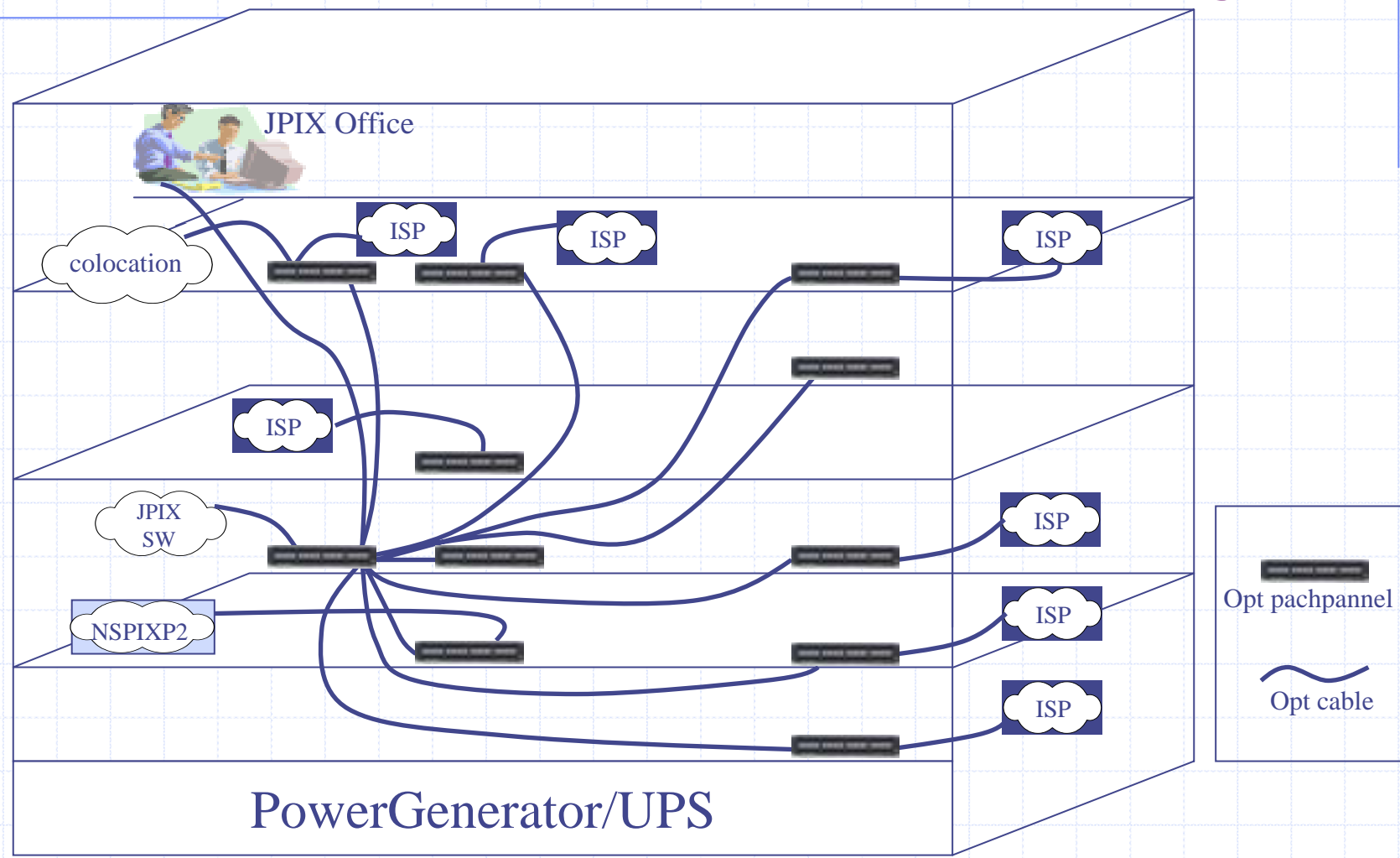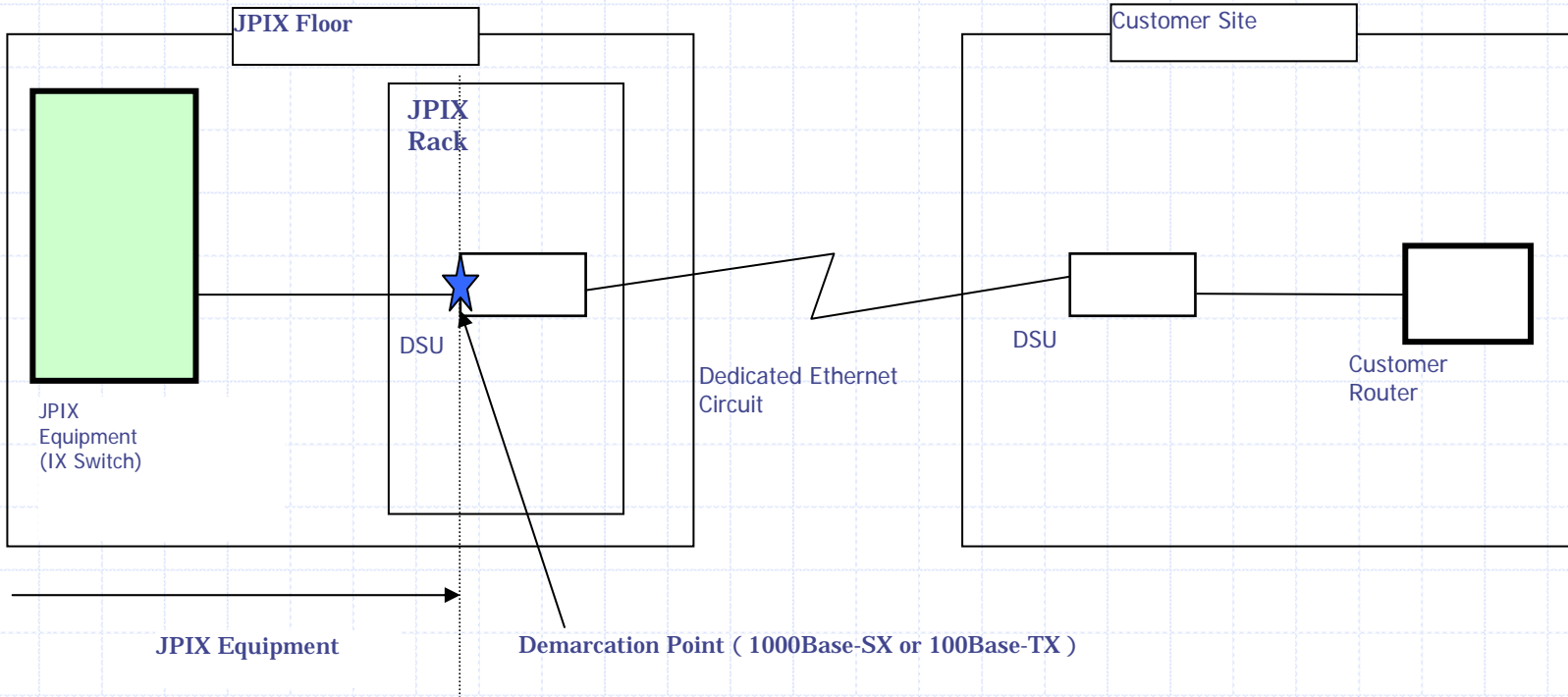
Expansion of JPIX

February, 2007

Network Configuration

Main Site

Other Sites

ISP

ISP

ISP

ISP

ISP

ISP

ISP

ISP

10GbE,GbE

Main Switch

Main Switch

JPIX Value Added Service

FE

Sub Switch

Remote Access ATM

Remote Service Interface Converter

Ethernet

JPIX Otemachi KDDI Otemachi Bldg.

Remote Connection Diagram
1000Base-SX or 100Base-TX

JPIX Floor

JPIX Rack

Customer Site

DSU

JPIX
Equipment
(IX Switch)

DSU

Customer
Router

Dedicated Ethernet
Circuit

JPIX Equipment

Demarcation Point   1000Base-SX or 100Base-TX

Switching capacity

- ◆ To handle very rapidly growing broadband traffic, we are offering 10GbE port since Sept. 2003.

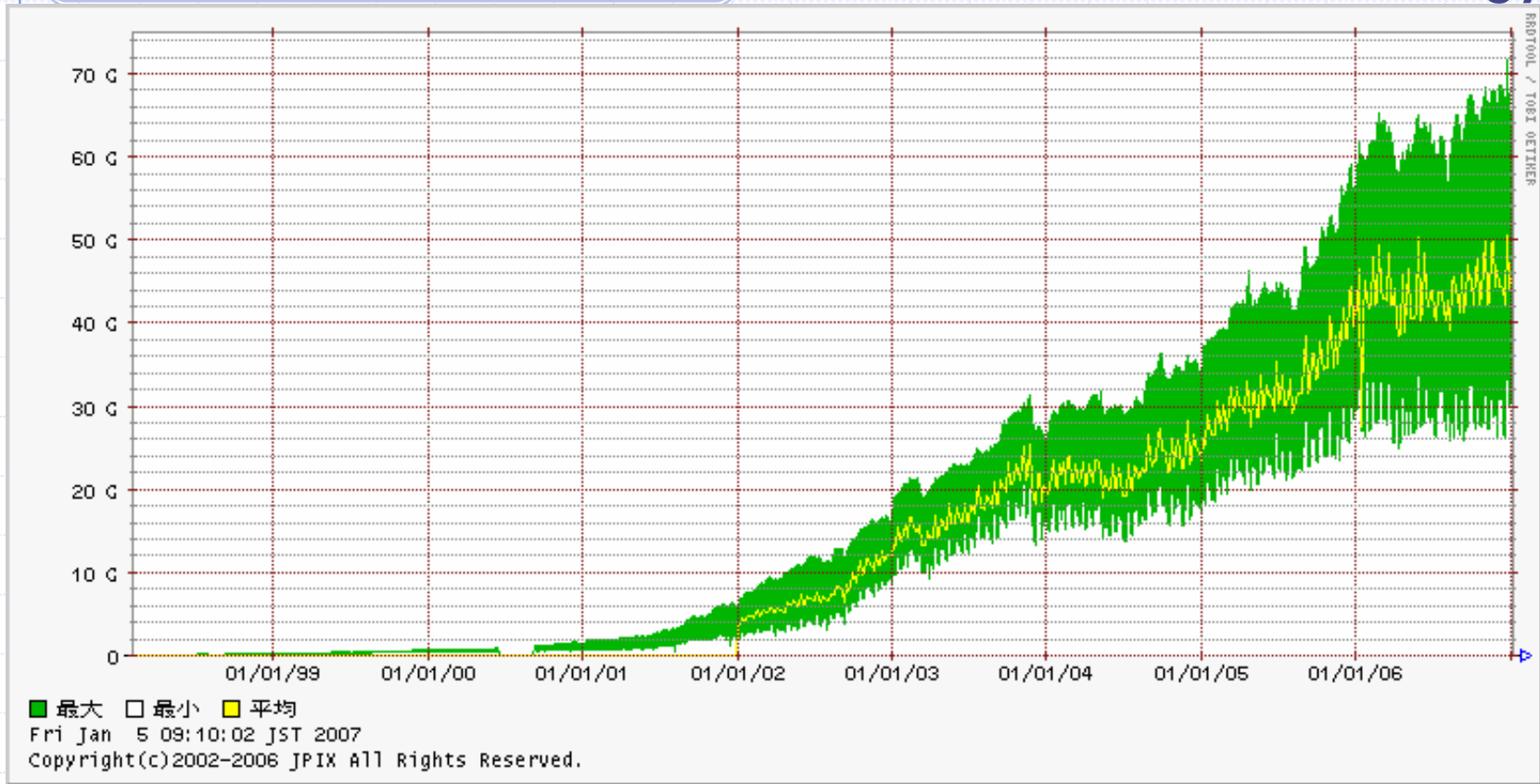- ◆ Aggregate switching fabric throughput of 1.68 Tbits/s.

Traffic Volume

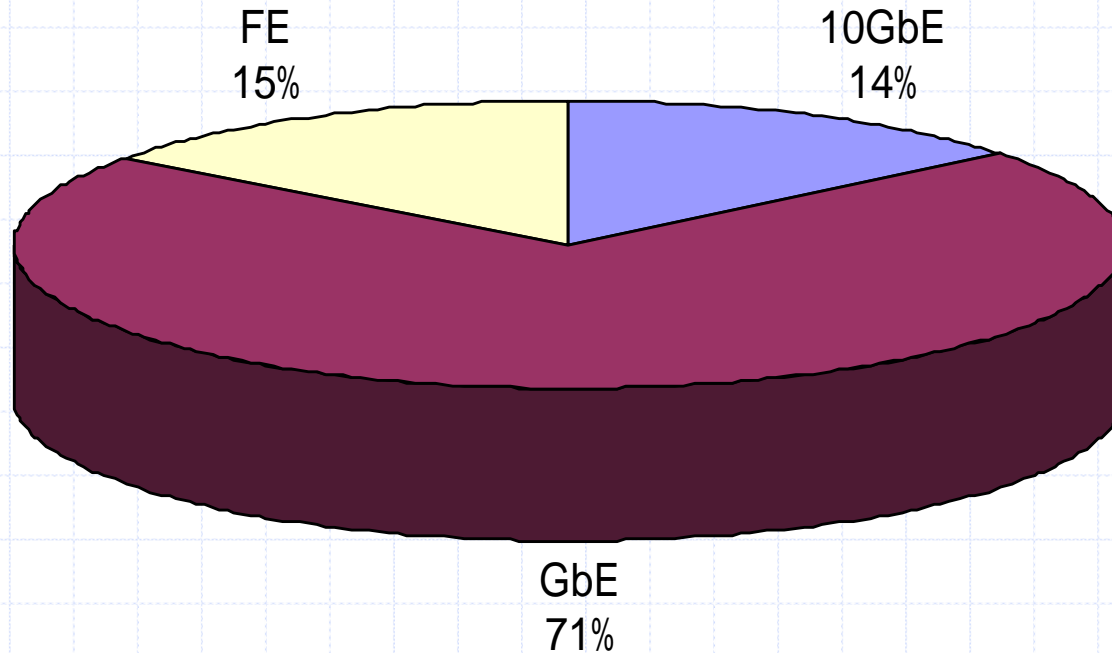IX backplane Max/Min Traffic

January 5, 2007

67G

■ 最大　□ 最小　■ 平均
Fri Jan 5 09:10:02 JST 2007
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JPIX customers and ports

(Jan. 2007)

◆ No. of customer ISPs : 115

FE
15%

10GbE
14%

GbE
71%

Thank you

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