Peering Status in Australia

Stephen Baxter (steve@pipenetworks.com)

http://www.PIPEnetworks.com/

APRICOT 2003, Taipei
19-28, February

PIPE Networks is a trading name of IX Services Australia Pty Ltd

CONTENTS

Early Days (1995 thru 2000 and a bit)

pipenetworks

AUIX

State Based IX points

SAIX - South Australia

WAIX - Western Australia

VIX - Victoria (Melbourne)

BIX - Brisbane

SIX - Sydney

Only one of the early efforts attracted any substantially large ISPs

PIPE Networks is a trading name of IX Services Australia Pty Ltd

AUSBONE

An attempt at a national peering network

Ausbone (http://www.ausbone.net)

POPs in each state (never in the West)

Used a Frame Relay network for inter POP carriage

Moved to outsourcing inter POP carriage

Shaky financially

New Comers

PIPE Networks - more on us later

AUSIX - the old Frontier Global Centre IX point, originally in Sydney, now in Melbourne.

Pihana - www.pihana.com. Seem to be taking part in the industry consolidation in Australia with a recent merger with Equinix

(http://www.bizjournals.com/pacific/stories/2002/12/30/daily59.html)

pipenetworks

Regulation – a first go

Competition Notice

Creates Gang of Four

Regulation Distorts the market

Regulation does not help Internet Pricing

Bubble Burst

Cash and profit are no longer dirty words

Internet Access finally comes down in price

Money spent in building Data Centres has been misdirected (not only in Australia)

Data Centres have been built too far from customers.

Regulation rears its head again

ACCC is being asked to intervene again

Monopoly carrier has asked ACIF to adjudicate

ACIF has poor track record in solving disputes speedily

Peering is about Content

ISP to ISP peering does not deliver full benefits

ISPs are sources, Web hosting companies are sinks - You must match sinks with sources

There are easily definable sources of content in Australia

Peering should dramatically increase QoS to users.

Why is peering in Australia so hard

Australia is a land dominated by Telstra.

Intra country prices too high – reduced 20 fold in 5 years but still high when compared to Internet access.

Why build a network when you can buy traffic. Bundled traffic deals are that good that it is hard to justify a network build for the purposes of domestic peering.

The fresh approach – PIPE Networks

Managed peering, MLPA routers, routing databases

Region based Peering

Carrier Neutral Locations

Carrier license for high speed intra city networks (defeat local loop issues)

Major content on-board (Hostworks, ABC, WebCentral)

Growth – 80% every 3 months

Managed peering, MLPA routers, routing databases

Each IX point uses Cisco 7200 series router

Cisco Catalyst switches

Daily updates from Web front end DB (RADB integration coming soon)

Prevents inexperienced operators leaking bad routes to mesh

Routing database
Connection details

CONNECTION: BRISBANE

Router Name	RQ-127CREEK-7200-01
Peer AS	9722
PIPE IX IP Address	218.100.0.33/30
CUSTOMER IX IP Address	218.100.0.34/30
Notification Email Address	postmaster@powertel.net.au Click to edit/add

ADD ROUTE
Route Filter
AS PATH Filter
ALL Routes
BULK IMPORT
LOG FILE
GLOBAL CHANGES FOR ROUTER
Display filter log

Please note that all updates to the route server happen at 0730 EST every day of the week

		ROUTE	AS PATH
del	who	202.76.136.0/24	9837 10113
del	who	202.76.143.0/24	9837 10113
del	who	202.76.144.0/24	9837 10113
del	who	202.76.145.0/24	9837 10113
del	who	202.76.146.0/24	9837 10113
del	who	202.76.149.0/24	9837 10113
del	who	202.76.150.0/24	9837 10113
del	who	202.76.152.0/24	9837 10113
del	who	202.76.158.0/24	9837 10113
del	who	202.76.163.0/24	9837 10113
del	who	202.76.168.0/24	9837 10113
del	who	202.76.169.0/24	9837 10113
del	who	137.172.77.0/24	9837 18108
del	who	137.172.193.0/24	9837 18108
del	who	61.8.96.0/19	9837 9476
del	who	61.95.0.0/20	9837 17637
del	who	61.95.16.0/20	9837 17642
		61.95.22.0/21	9837 17642

Routing database – routing controls

Generation of distribute list and filter lists for customers to use.

All connections get filtered in and out based on routes in DB

These will be the access lists applied to your conenction based on the information given so far to the PIPEdb.
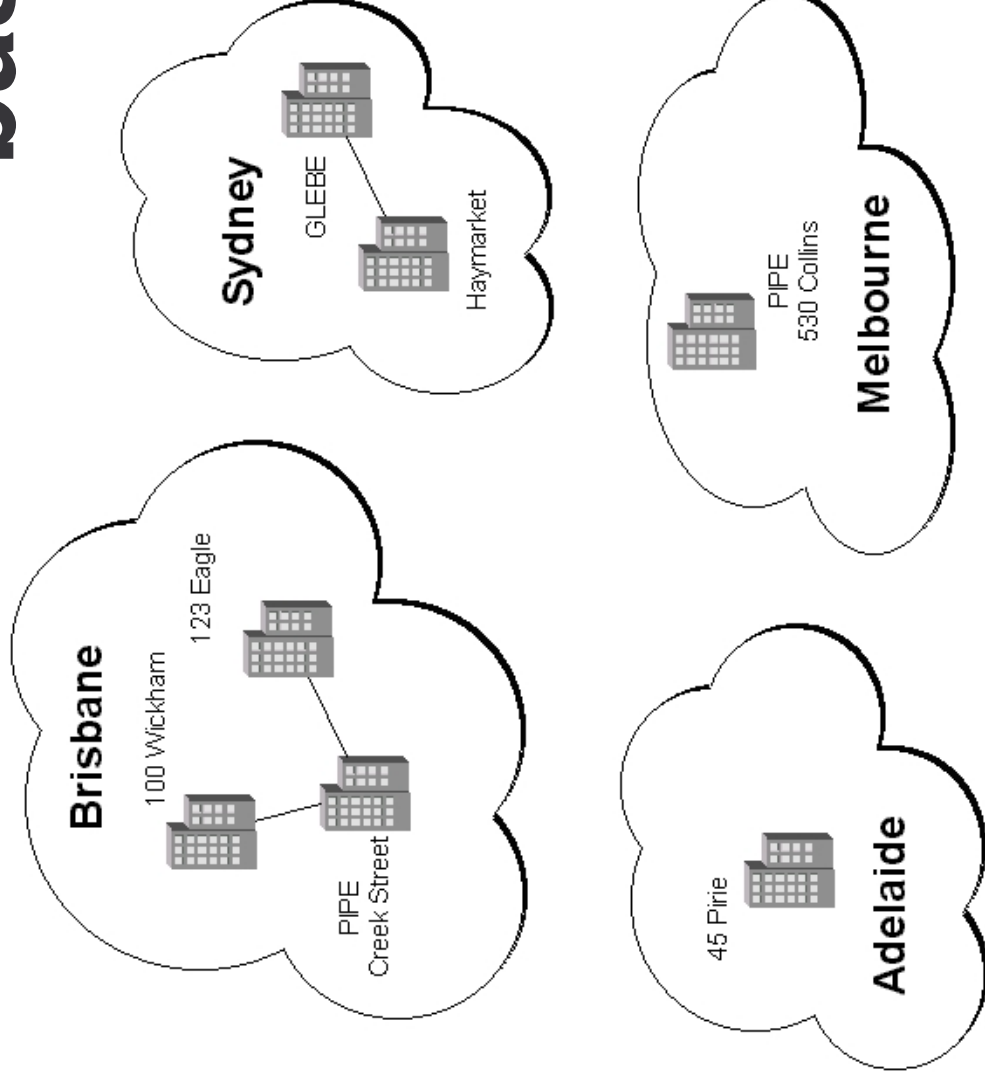
INBOUND LIST

```
no access-list 2201
access-list 2201 remark  Inbound ACL for AS9837 using 218.100.0.34/30
access-list 2201 permit  ip 202.76.136.0 0.0.0.0 255.255.255.0 0.0.0.0
access-list 2201 permit  ip 202.76.143.0 0.0.0.0 255.255.255.0 0.0.0.0
access-list 2201 permit  ip 202.76.144.0 0.0.0.0 255.255.255.0 0.0.0.0
access-list 2201 permit  ip 202.76.145.0 0.0.0.0 255.255.255.0 0.0.0.0
access-list 2201 permit  ip 202.76.146.0 0.0.0.0 255.255.255.0 0.0.0.0
access-list 2201 permit  ip 202.76.149.0 0.0.0.0 255.255.255.0 0.0.0.0
access-list 2201 permit  in 202.76.150.0 0.0.0.0 255.255.255.0 0.0.0.0
```

Regionally based Peering

- No network between locations

- We have customers who offer network services between locations

Sydney

GLEBE

Haymarket

Melbourne

PIPE
530 Collins

Brisbane

123 Eagle

100 Wickham

PIPE
Creek Street

Adelaide

45 Pirie

PIPE Networks is a trading name of IX Services Australia Pty Ltd

Carrier Neutral Locations
Licensed Carrier and willing to flaunt it

- Any carrier may enter our locations to sell services
- We place no commercial restrictions on cross connects in our data centers
- Run fiber between location in cities to get high speed
- License allows use of radio, FSO etc for good outcomes

PIPE Networks is a trading name of IX Services Australia Pty Ltd
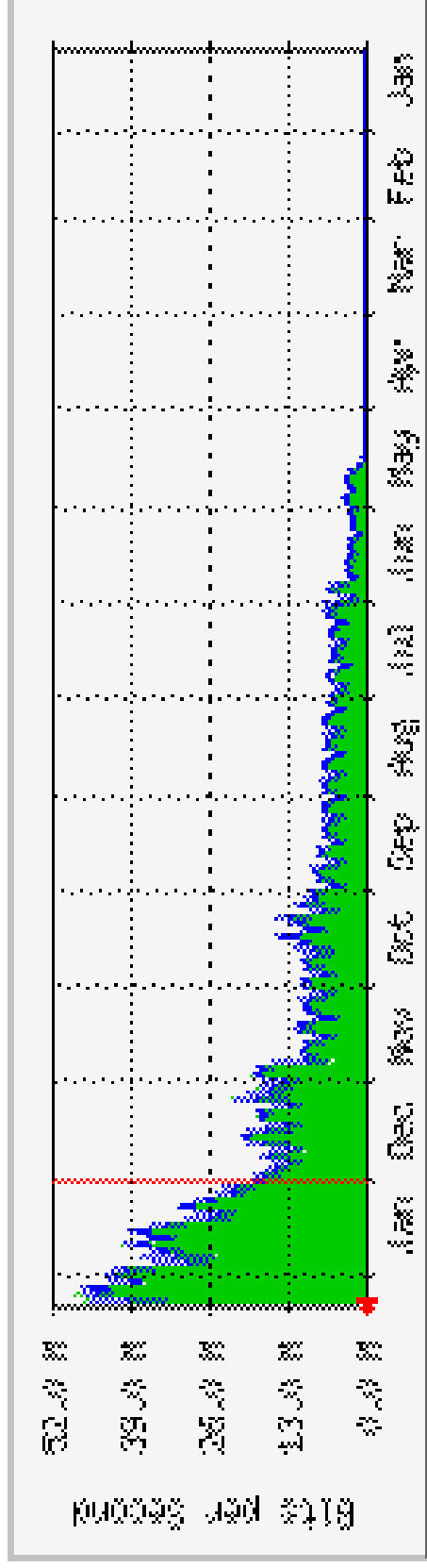
Major content on-board

- ABC

- Hostworks

- WebCentral

- QLD Government – all governments being approached

- Uni sector – still in negotiations

Growth – 80% every 3 months

Brisbane IX only, other states are still coming online

Thank you

Questions.

PIPE Networks is a trading name of IX Services Australia Pty Ltd