

Peering Status in Australia

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<http://www.PIPEnetworks.com/>

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Early Days (1995 thru 2001)

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

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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
Collapsed 2002 due to financial strains

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New Comers

PIPE Networks - more on us later

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

Equinix – rose from the ashes of Pihana Pacific. Large co-location facility in Mascot NSW. Global company running their IBX product. Data centre location makes it hard to attract ISPs.

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Regulation – a first go

Competition Notice

Creates Gang of Four

Regulation Distorts the market

Regulation does not help Internet Pricing

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Bubble Burst 2001

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.
Data Centres built with any thought to the local loop issues.

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Regulation rears its head again

.ACCC is being asked to intervene again (late 2002)

.Monopoly carrier asked ACIF to adjudicate

.ACIF has poor track record in solving disputes speedily. ACIF forum Feb 2003 does not solve anything.

.ACCC announces declaration enquiry April 2003 asks for responses (<http://www.accc.gov.au/content/index.phtml/itemId/269309>)

.ACCC asks for further responses May and June 2004. Surveys sent to industry players.

.ACCC find this a very tough area

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Peering is about Content

ISP to ISP peering does not deliver full benefits

ISPs are sources, content 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.

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Peering is about quality

ISPs will only purchase enough BW for their requirements, peak demands are very often not catered for. They purchase rate limited BW.

Users on 1.5M DSL circuits can heavily impact peak demand.

Peering is about wide open BW and no incremental cost for increases in traffic levels.

Where there is no penalty for high speed Interconnection then it will actually occur.

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Consequences of not peering

END USERS accessing content on non peered networks get financial/quality penalty.

END USERS Download limits and download capping, excess data to Tier 1.

Many ISPs offer access to peered resources for free/zero rated or for a flat fee – no more penalty to the **END USER**.

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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.

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The fresh approach – PIPE Networks

Managed peering, MLPA routers, routing databases

Region based Peering

Carrier Neutral Locations – our own locations around Australia.

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

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

Growth – 60% every 3 months

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Managed peering, MLPA routers, routing databases

Each IX point uses Cisco 7200 series router

Cisco Catalyst switches

Daily updates from Web front end DB

Prevents inexperienced operators leaking bad routes to mesh

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Routing database Connection details

CONNECTION: BRISBANE

Router Name	BC1-127CREEK-7200-01	del rtrn	202.76.136.0/24	9937 10113
Peer AS	9722	del rtrn	202.76.140.0/24	9937 10113
PIPE IX IP Address	218.100.0.3330	del rtrn	202.76.144.0/24	9937 10113
CUSTOMER IX IP Address	218.100.0.3430	del rtrn	202.76.148.0/24	9937 10113
Notification Email Address	portmaster@powerhelix.net as Click to email	del rtrn	202.76.152.0/24	9937 10113
ADD ROUTE		del rtrn	202.76.156.0/24	9937 10113
Route Files		del rtrn	202.76.160.0/24	9937 10113
AS PATH Filter		del rtrn	202.76.164.0/24	9937 10113
ALL Routes		del rtrn	202.76.168.0/24	9937 10113
BULK IMPORT		del rtrn	202.76.172.0/24	9937 10113
LOG FILE		del rtrn	202.76.169.0/24	9937 10113
GLOBAL CHANGES FOR ROUTER		del rtrn	137.172.77.0/24	9937 10108
Display filter log		del rtrn	137.172.129.0/24	9937 10108
Please note that all updates to the route server happens at 0730 EST every day of the week.				
		del rtrn	61.21.0.0/20	9937 13647
		del rtrn	61.21.16.0/20	9937 13647

Major content on-board

ABC

Hostworks

WebCentral

QLD Government – all governments being approached

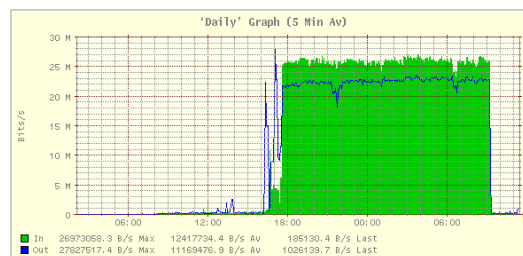
Uni sector – still in negotiations. Individual universities are keen to talk.

AARNET does not like MLPA peering – we have no idea why.

JCU commenced trial last week and data rates are encouraging.

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JCU Peering link to PIPE Networks



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Thank you
Questions.

We extend an invitation to all
Universities/Institutions to peer

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