
Subject: FW: Distance Education via Multicast [SEC=UNOFFICIAL]

Security Classification:
Unofficial

From: Michael Wilson
Sent: Friday, 22 March 2013 12:10 PM
To: O'Leary, Grahame
Cc: James, Julian
Subject: RE: Distance Education via Multicast [SEC=UNOFFICIAL]

Thank you Graham

was proposing an alternative to the present NBN system which requires the multicast to be delivered to each RSP within a POI. They are proposing that they supply the multicast on a second ethernet port independently of the RSP's port. It certainly would help our cause if the multicast was available across all RSPs.

As I have noted previously delivering synchronous distance learning via unicast means you only need to deliver it to one point to access everyone (the internet). There are however other problems with delivering via unicast. Although the NBN itself is honouring all traffic classes (we need traffic class 2 – interactive audio and video – to guarantee delivery with minimum packet jitter without us buffering) only one RSP (AARNET) will guaranty that traffic class 2 traffic will be honoured within their network and their charter restricts them from providing residential services.

Multicast means delivery to every POI – a huge cost – but the multicast traffic has the highest level of QoS which guarantees no need for buffering no audio brake up or video pixilation.

Make some exemption for multicast please.

From: Michael Wilson
Sent: Wednesday, 28 November 2012 12:07 PM
To: O'Leary, Grahame
Subject: Distance Education via Multicast

Hi Graham

Each morning I try to log into the Interactive distance Learning networks I have built to see that all is functioning as expected.

I thought it might give you a small insight into what we wish to do over the NBN by showing you via a screen shot what we are doing now - both were captured this morning from my office in Darwin.

The USP image is a screen shot taken as the University of the South Pacific are setting up for a vice chancellors meeting. Note logged into the session is Kiribati, Samoa, Tuvalu, Tonga and the Marshall Islands all serviced by satellite and several Fiji terrestrial sites. All the sites are receiving the images you see via 1 * 1.5 multicast IP stream and everyone sees exactly what has been captured on the screen. Interestingly the network was all funded by AusAid.

The ASSOA image is a screen shot of a lesson this morning from the School of the Air in Alice Springs the students are viewing this via the NTDET satellite service which was a federally funded Clever Networks project and has been in place for 6 years now. You will note from the venue window (form on the right) that there are 13 students in the lesson (counting my icon at the bottom) all being served by 1 * 1.2 mbps

multicast stream. The teacher has turned on 3 students video's and has selected the 'overhead camera' so the students can see the white board on her desk. Everyone in the classroom sees exactly what has been captured. (it's a maths lesson I believe).

I hope you understand that if we were delivering this service via unicast we would only need 1 internet facing connection for our server. However to do this multicast you have regulated that we must connect our server to 121 POI.

I can assure you that that requirement places this service beyond the financial reach of any education group and you need to review it.

Regards

Michael W
