

NZ Digital TV

Catch up on the state of
Digital TV in NZ
BarCamp December 2007

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OpenMedia

History

- We have had Digital TV for quite some time
 - Sky Digital started in 1997
 - Optus B1 used to deliver service
- Terrestrial Digital tests from early 2000
 - America's cup was available on DVB-T in MPEG2
- TVNZ planned a digital satellite service with Telstra Clear
 - Telstra Clear pulled out
- Optus B1 transmissions of TV One + TV 2

freeview

- Announced June 2006 as a Non Profit consortium
 - Kordia to provide transmission facilities
- Dual Service
 - Terrestrial (DTT) and Satellite (DTH)
- Required Optus D1 for DTH
 - Optus B1 was dying
 - Optus D1 has more power
- 100% Coverage via DTH launched May 2007
- 75% DTT coverage planned for April 2008

The Channels

- 1 TV One
- 2 TV 2
- 3 TV 3
- 4 C4
- 5 Maori
- 6 TVNZ6 – Launched 30 Sept 2007
- 7 TVNZ7 – Planned April 2008
- 20 TVNZ Sport Extra – occasional channel
- 21 Stratos – Launched 3 Oct 2007
- 22 Parliament TV – Launched 9 Oct 2007
- 23 Cue – Joined 29 November 2007

Additional services planned by TV Works and Maori TV

What happened to Prime

- Prime were part of the consortium until they were bought by Sky TV
- No Prime on DTH
 - Sky's excuse is because of sports rights
 - Prime's DTH service cannot be picked up in AU
- Prime did commit to DTT
 - Originally planned HD service from launch of DTT
 - Sky decided to delay service until sufficient take up of freeview

DTH Technical Bits

- Standard FTA DVB-S Service
 - Room for up to 18 channels
 - MPEG2 SD Video
 - No encryption is used
- Dual EPG Streams
 - MHEG-5 EPG used by official STBs
 - DVB-EIT used by other STBs
- MythTV 0.20 SVN has support for MHEG-5
- OpenMedia myPVR shipped support for MHEG-5 prior to official launch of service

MHEG-5 EPG

2

Fri 2 Mar

9.30am Pilates TV

10.00am Infomercials

11.30am Shortland Street

12.30pm Dr Keith Ablow

1.30pm Tyra

2.30pm The Nanny

3.00pm The Go Show

3.25pm Cool Kids Cooking

3.30pm F-Zero

4.00pm Codename Kids Next
Door



TV2, 9.39am

No synopsis provided

G

Prog

Chnl

Prev Day

Next Day

OK Watch TV or

EXIT

EPG Now/Next

freeview

DTT Technical Bits

- Transmission sites now confirmed
- Reference Kordia's Website
- Will utilise 3 DVB-T multiplexes
 - up to 18-20 channels
 - H.264 video stream
 - combination of SD and HD services
- EPG stream will be MHEG-5 only
 - no DVB-EIT stream will be present on DTT
- TVNZ Confirmed Olympics in 720p HD

DTT Testing

- Started in Christchurch and Wellington first
- Confirmed testing at most other locations
- Initial testing has been simple test loops
- Auckland tests started 7 December
 - Currently only confirmed from Waiatarua
 - 3 Active Muxes
 - TVNZ
 - MediaWorks
 - Kordia

TVNZ Mux

- Currently 5 Active channels
 - TVONE
 - 720p H.264 + AAC Audio
 - TV2
 - 720p H.264 + AAC Audio
 - TVNZ 6
 - Live channel – 576i H.264 + AAC Audio
 - TVNZ 7
 - Showing TV2 – 576i H.264 + AAC Audio
 - TVNZ SPORT EXTRA
 - Live channel – 576i H.264 + AAC Audio

MediaWorks Mux

- Currently 2 Active Channels
- Only showing Test loops
- 1080i H.264 with MP2 audio

Kordia Mux

- 7 Active TV Channels
 - 6 x SD H.264 + MP2 Audio
 - 1 x HD 1080i H.264 + MP2 Audio
- 2 Unknown inactive channels
- 4 Inactive Radio channels
 - Concert FM
 - National Radio
 - 2 new services

A/V Codec Issues

- Most DVB-T tuner card don't ship with a H.264 video codec
- Interlaced video is using advanced form of H.264 that most codecs haven't implemented
 - See CoreAVC for Windows
 - Not currently present in FFMPEG for Linux
- AAC is a recent addition to the mix

There is no DRM

- Confirmed by Steve Browning head of freeview
 - No encryption of the DTH or DTT streams
- What about HDCP?
 - HDCP is over a cable, not over transmission
 - Official STBs will be using HDCP over HDMI when providing HD to a screen.
 - Can be enabled/disabled by the broadcaster
- Will it be encrypted in the future
 - freeview = free

Links

- freeview - <http://freeviewnz.tv>

- Kordia Coverage Maps

<http://www.kordiasolutions.com/index.php?q=node/1127>

- Frequency Plan

<http://www.rsm.govt.nz/cms/policy-and-planning/current-projects/broadcasting/digital-television-2007-frequency-plan>

- My DTT Testing

- <http://mythtv.co.nz>

- myPVR

<http://www.mypvr.co.nz>

Demo

- Live Scan
- Tools and Issues
- Video – Catch me during the day