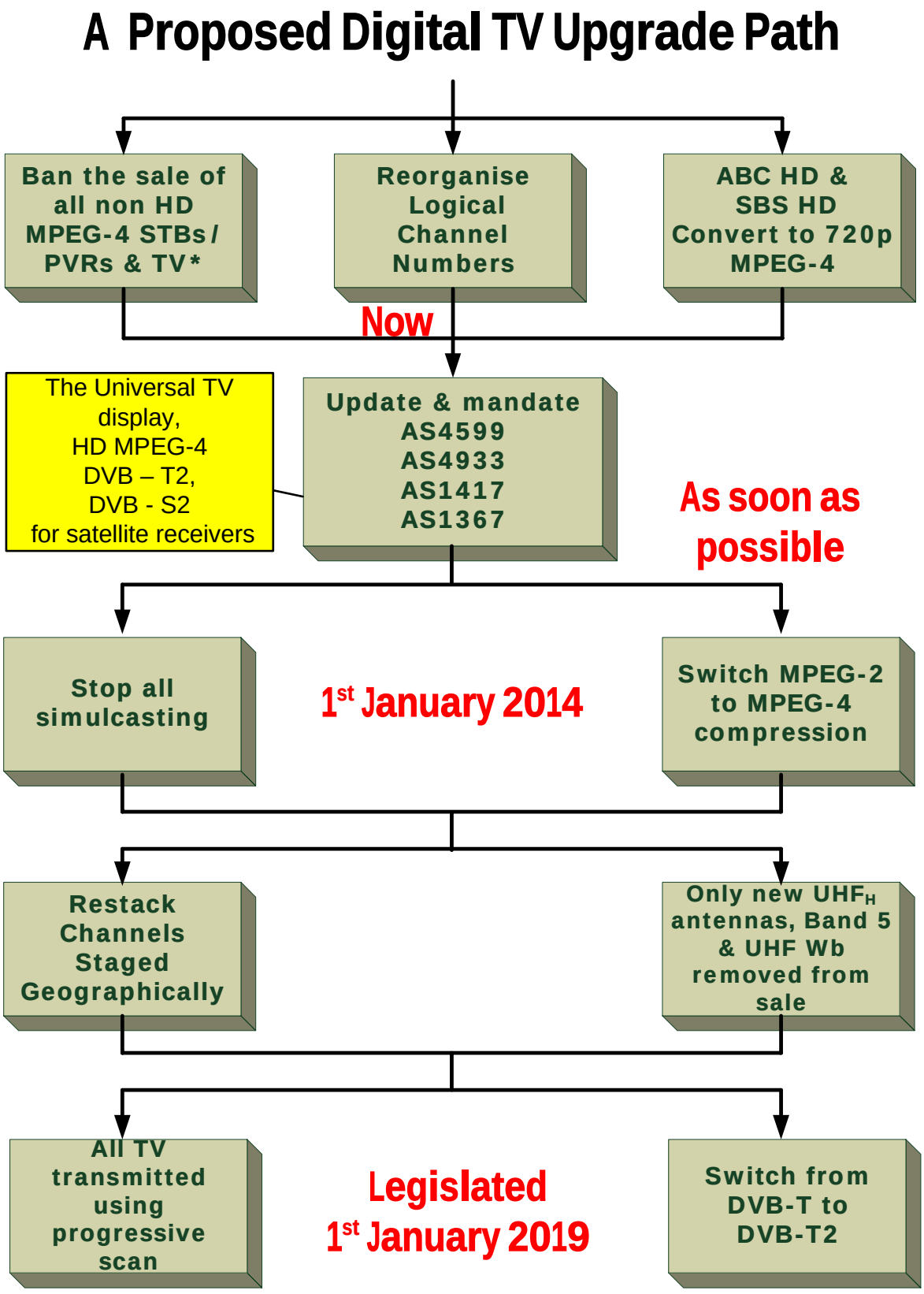
Question

3.21 Should digital dividend spectrum be used to implement DVB-T/MPEG-2 to DVB-T2/MPEG4 or DVB-T/MPEG-4 conversion strategies? If so, which strategies?



***** must be able to produce a viewable program from HD MPEG-4 signals. Display may have less resolution

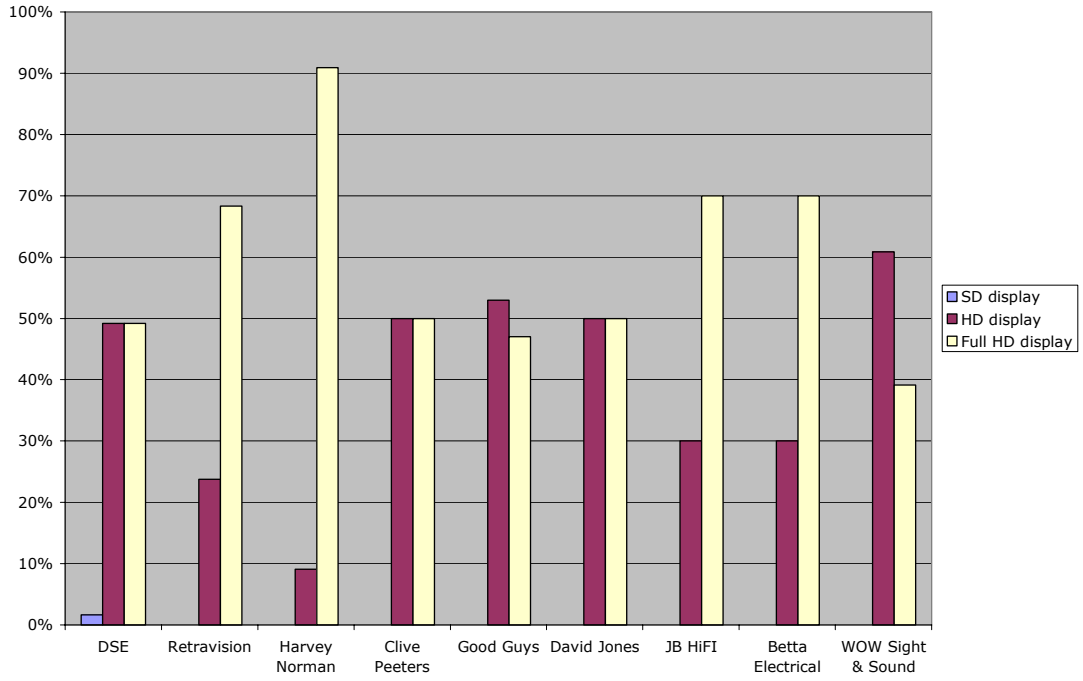
Ban the sale of all non HD MPEG-4 STBs / PVRs & TV*

Correction

Immediately stop the sale of non HD MPEG-4 Set Top Boxes, PVRs and ~~DVB-S2~~ satellite receivers. This should be DVB-S.

Reorganise Logical Channel Numbers

The resolution of TVs on Sale



All widescreen TVs on sale are either HD or Full HD.

With all new purchases and many existing purchases of TVs being capable of HD display, the single digit Logical Channel Numbers need to be changed to carry the main program channel in HD.

The only HD labelling used must only be on HD original programs. The problem at the moment is that the viewer is being conned into believing upconverted SD is HD quality which is not true. This will also ensure that advertisers can use HD advertisements and be assured that most viewers will see them.

ABC HD & SBS HD Convert to 720p MPEG-4

These program streams have been selected because;

- they transmit very little HD original programs. As a result nearly all of the time the content is identical to their respective ABC1 and SBS1 standard definition program streams.
- There can be no effect on commercial station's bottom line.
- DBCDE/ACMA could then include the ability to see these programs in surveys to ascertain the true level of MPEG-4 reception.

Update & mandate AS4599 AS4933 AS1417 AS1367

AS 1417.2-1991 Receiving antennas for radio and television in the frequency range 30 MHz to 1 GHz – Performance.

- Currently nearly all the state capital city antenna installations are continuing to include RF channels 0 – 5A. These RF channels will never be used for digital TV because of unreliable reception. Nearly all antennas being installed now are for digital reception. So the above type of antennas should be banded from sale now.

The only sites which still require a band 1 and/or 2 antenna

Area Served	Callsign	Network	ERP (kW)	Population
SW WA (Bunbury)	**SSW3**	**GWN**	**100**	**200 000**
Gordonvale	TNQ2	10 Qld	1	4420
Herberton	TNQ5A	10 Qld	0.04	794
Kambalda	VEW3	GWN	0.02	2705
Mission Beach	TNQ5A	10 Qld	0.2	992
Mount Garnet	ABNQ2	ABC Qld	0.024	879
Murrurundi	NBN1	NBN	0.1	805
Wandoan	ABQ5A	ABC Qld	0.16	676

- DVB-T2 is currently only being used on UHF, we intend to use it on band 3. DVB-T2 is more sensitive to errors. Errors are more likely in band 3 and made significantly worse by antennas designed for RF channels 0 – 5A. Since many antennas installed now are likely to be in use when DVB-T2 is likely to start the correct type of antenna must be installed from now on.

In addition to the banning of new antennas for channels below channel 6, masthead amplifiers, diplexers and distribution amplifiers must contain a ≥174 MHz high pass filter as well as an ≤820 MHz low pass filter. If the digital dividend is accepted the high pass filter will have be ≤701 MHz instead.

The following types of receiving antennas need to be stocked with the following table.

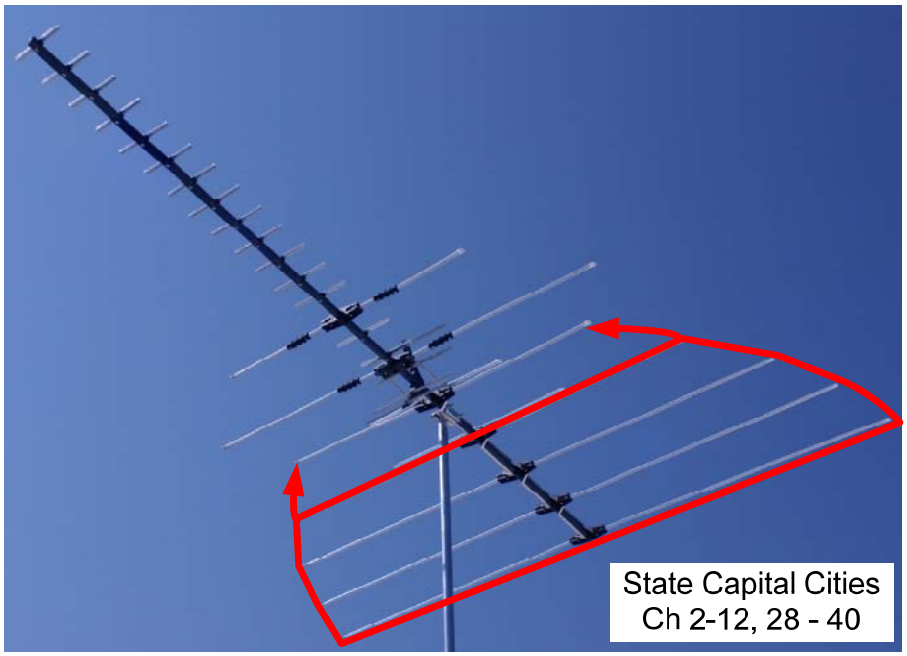
Transmitter Polarisation	Prime	Fringe	Deep Fringe
Horizontal	Short Yagi-Uda (Low gain)	Long Yagi-Uda (High gain)	≥ 4 bay phased array
Vertical	2 bay phased array	4 bay phased array	Long Yagi-Uda (High gain)

Deep Fringe needs single band antennas.

The above measures will also increase the reliability of present digital transmissions.

Public Education in the implementation of Digital Antenna equipment.

Australian Consumers' Association and State Consumer Affairs Departments need be informed that any antenna designed to receive Australian channels 0 – 5A, 21 – 26 and >69 are **not** "Digital" Antennas.



The red highlighted section will never be used for digital TV

If the aluminium in the red section are cut in to shorter lengths the antenna will become more sensitive to digital transmissions

Alan Hughes.