TRANSPONDER TRANSITION PLANS FOR PUBLIC TV HD SERVICES
June 2008

At the request of stations, PBS Programming is moving forward with a plan that will culminate in distribution of the National Program Service (NPS) in High Definition (HD) on two Ku-band real-time satellite feeds (East & West) by the end of calendar 2008. PBS Technology and Operations has developed a satellite transponder technical transition plan to facilitate the distribution of multiple HD program services for stations. The plan affects only the Ku-band transponders. The C-band transponder allocation plan on the AMC-1 Satellite will not change during this transitional time-frame.

Transponder Changes to Facilitate HD NPS Plans

Currently, there are two HD Channels which occupy transponder 22 on AMC-3. Those two channels will also exist on transponder 22 on AMC-21 when the Interconnection System transfers to the new AMC-21 satellite in late fall 2008. All Public TV transponders on AMC-21 will be the same as the current transponder plan on AMC-3 (i.e.: the services on AMC-21 will use transponders 21 – 24 also).

Today, one of the channels on transponder 22 is the fully packaged HD Channel (DT2), which is transitioning to reflect NPS programs for the Eastern US (DT2 or HDX). The second channel currently accommodates soft-feeds in HD, as well as distribution of the NewsHour in HD. For the transition to an HD NPS service, the transponder 22 HD soft-feed channel will be converted to an HD NPS West fully packaged service (DT3 or HDXP) which will be a full three-hour delay of DT2, with full interstitial materials and no slates or count-downs. HD soft feeds will be moved to transponder 24 (becoming a new DT4 channel). The move of HD soft-feeds to transponder 24 will displace the current NPS SD program services 500 through 504. SD services that will remain on transponder 24 are **World**, **Create**, **V'me** and one SD channel for soft feeds.

To assure a smooth transition for the stations, PBS will duplicate the displaced 500 - 504 services on transponder 21 prior to the HD soft-feed launch. The SD services will begin on transponder 21 approximately 30 days prior to the launch of the additional HD services and will be maintained for approximately 60 days after the HD soft-feed channel (DT4) is activated on transponder 24. This will give stations time to implement any changes they need to make to their operations to utilize the HD services. PBS will monitor station progress to insure that all stations make the necessary changes to receive the new HD services.

Transponder 21 is the non-real-time (NRT) transponder and currently is used for NRT testing. NRT testing will continue utilizing satellite simulation equipment in the PBS lab during the transition period for HD services. The following diagrams provide a graphic illustration of the "Current" transponder chart, the "Transition" transponder chart and the "Post-Transition" transponder chart. The "Service Migration" diagram illustrates how existing SD NPS services will roll-up into the new HD services. Information about equipment for receiving the HD services, and plans for an HD SCPC service are described in an additional section of this paper beginning after the graphics.

Current Transponder Allocations
AMC-3 – June 2008

T-21	Reserved for Non-Real-Time Distribution								
T-22 MCPC	PBS HD Channel ET/PT Prime Time DT2 (Packaged 24/7)				HD Soft Feeds DT3 Occasional Services				
T-23 SCPC	Montana	NDI	Annenberg (Distribution ends fall '08)		APT 511	Regional Uplinks 512/812	NETA 513		
T-24 MCPC	X 500	NPS-1 501	NPS-2 502	NPS-3 503	NPS-4 504	V-me	XP	WORLD	Create

Transition Transponder Allocations
AMC-21(AMC-3)
(~December 2008 through February 2009)

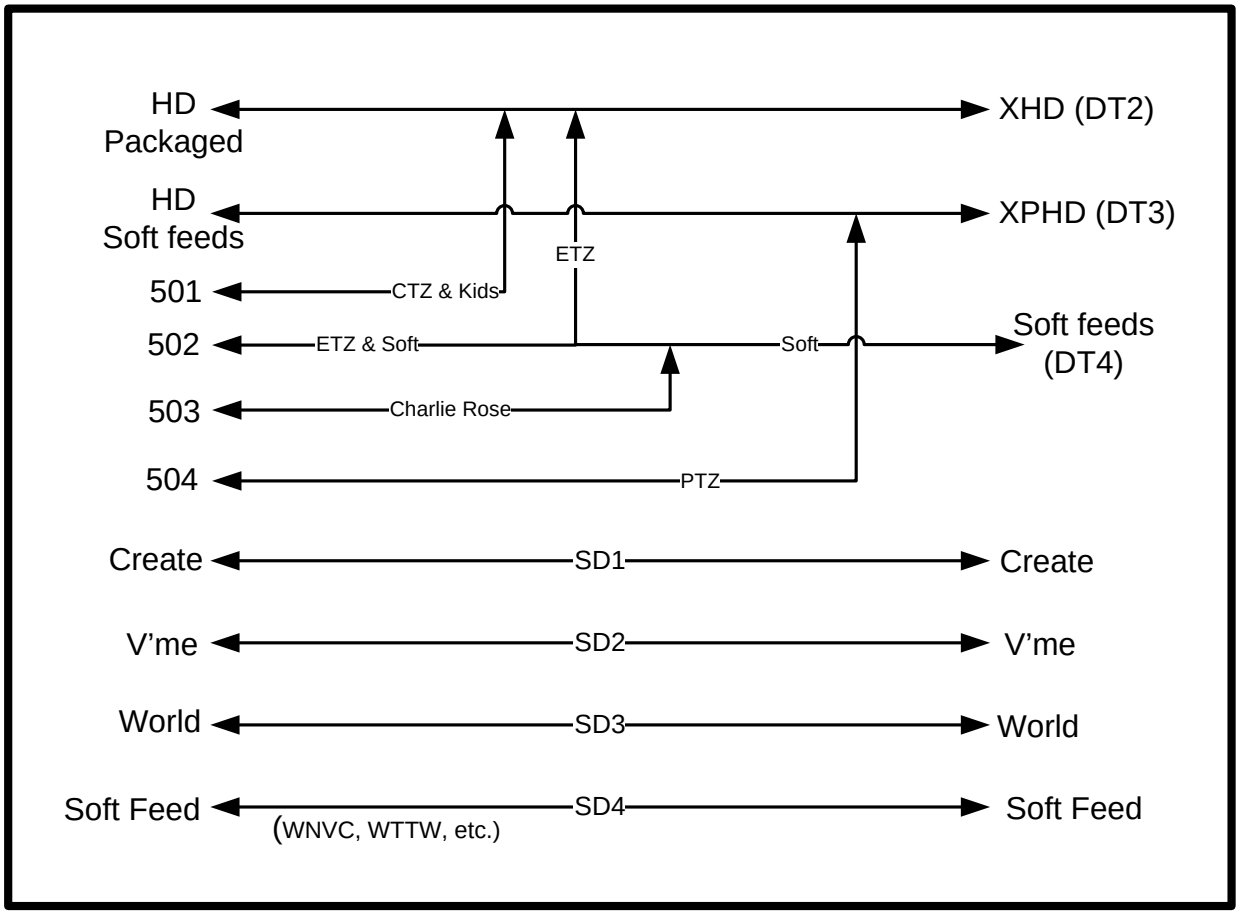
(AMC-21 expected to be in service before 12/08)

T-21 MCPC (transition)	500 - 504 (formerly on Transponder 24) beginning late in 2008. Feeds continue through the DTV transition in February 2009						
T-22 MCPC	**DT2 --** (HDX East) Packaged 24/7 NPS				**DT3 --** (HD XP West) Packaged 24/7 NPS		
T-23 SCPC	See Below	See Below	See Below		APT-SD	Regional Uplinks-SD	NETA-SD
T-24 MCPC	Create	V-me	WORLD	SD Soft Feeds	**NEW - DT4** HD Soft Feeds		

Post-Transition Transponder Allocations
(After February 2009)
AMC-21

T-21	Non-Real-Time Distribution					
T-22 MCPC	**DT 2** – (HDX -East) Packaged 24/7 NPS				**DT 3** – (HD XP West) Packaged 24/7 NPS	
T-23 SCPC	**DT 5--**SCPC HD Channel (See additional information below)				APT - SD	Regional Uplinks--SD	NETA--SD
T-24 MCPC	Create	V-me	WORLD	SD Soft Feeds	**DT4** -- HD Soft Feeds (i.e.: Plus, Fundraising Programs, Previews, Promos, Non-PBS HD)	

Service Migration Chart



Station IRD Equipment: Multipurpose Configurations Possible

The NGIS project provided flexible Sencore IRDs to all stations in 2006, and those units can be used to upconvert SD programs to HD or to downconvert HD programs to SD. In addition, many stations have purchased Bitlink receivers which also are capable of up and down conversion. PBS will be providing additional technical details about these IRDs over the next several weeks, so that stations will have information for setting up their equipment prior to any changes.

This means that stations with HD recording capability can play one HD program to air and record another in HD, but those who want to record in SD, or program their own SD channel will be able to record down-converted SD programs from the new HD services. Stations can test all this today with the current DT2 HD Channel or the DT3 HD Soft Feed Channel on Transponder 22 using either Sencore or Bitlink receivers. Stations with questions are welcome to contact Bob Ham at PBS (703)739-7532 or reham@pbs.org.

SCPC HD TRANSPONDER CAPACITY

In 2006, as part of the overall Interconnection System upgrade, the four Regional Uplinks were provided with HD encoding capability to support HD distribution for national distributors APT, NETA and any others requiring HD transmission. In order to provide this capacity, changes need to be made to the SCPC (Single Channel per Carrier) transponder (Transponder 23). Although not as efficient as MCPC (Multiple Channels per Carrier) operations, the SCPC transponder capacity allows any uplink in the country to access the satellite directly. The changes described below will enable uplinking of HD programming directly from the Regional Uplinks, as well as any other station uplinks in the system that have installed HD encoding equipment on their own.

The transponder changes to enable HD SCPC services will include relocating current services provided for Montana PTV and National Datacasting Inc. (NDI) to another transponder. As previously announced, the Annenberg Channel will end their use of the PTV Interconnection System in September 2008. PBS plans to relocate Montana and NDI in the same timeframe as the end of the Annenberg service (September 2008). The relocations will release 18 MHz on transponder 23 for HD services. The exact date when SCPC uplinking will begin from any of the four Regional Uplinks will depend upon the individual licensees operating those facilities. The HD SCPC transponder capability will become available around a September or October 2008 timeframe.

September or October 2008 is also the basic timeframe for the Interconnection System's transition to AMC-21. That transition is not expected to have an impact upon the timing of the service changes, because PBS will be illuminating both AMC-3 and AMC-21 in parallel for 60 days to facilitate station dish re-pointing. The existing Standard Definition SCPC services (511 – 513) will remain in service for an undefined period of time. More details about the SCPC services will be provided as they become available.

Current AMC-3 SCPC Transponder

T-23 SCPC	Montana	NDI	Annenberg (Distribution ends fall '08)	APT 511	Regional Uplinks 512/812	NETA 513

Post September/October 2008
AMC-3 (AMC-21)

T-23 SCPC	**DT 5 --** SCPC HD (APT, NETA, Others)	APT 511	Regional Uplinks 512	NETA 513