

shared among multiple licensees in a given geographic area. Absent an agreement otherwise, a proponent may:

(i) Secure a 6 MHz MBS channel for each licensee in exchange for the non-MBS channels assigned to the group. Following the channel swap(s) necessary to secure those additional MBS channels, the Transition Plan can provide for the licensing of the remaining channels in the LBS, UBS, and Guard Bands on a pro rata basis (with channel(s) in each segment being disaggregated when and if necessary to provide each with its pro rata share of the spectrum in each segment);

(ii) Provide for pro rata segmentation of the default MBS channel for the group, provided that the proponent commits to provide each of the licensees with the technology necessary for its EBS video programming or data transmissions to be digitized, transmitted and received utilizing the provided bandwidth. The non-MBS channels would be divided among the sharing licensees on a pro rata basis (with channel(s) in each segment being disaggregated when and if necessary to provide each with its pro rata share of the spectrum in each segment); or

(iii) Assign the default MBS channel assigned to the channel group to one of the licensees, if that licensee is the only one that elects to migrate video programming or data transmission tracks to the MBS. The remaining spectrum assigned to the group may be allocated among the licensees on a pro rata basis, with the 6 MHz in the MBS counting against that licensee's portion. To the extent necessary, the non-MBS spectrum can be disaggregated when and if necessary to provide each with its pro rata share of the spectrum in each segment. If the proponent chooses to effectuate a channel swap to provide more than one channel in the MBS, the remaining channels assigned to the group (after considering that one or more LBS/UBS channels and associated Transition Band channels will have been swapped away to provide the additional MBS channel) can be allocated among the licensees on a pro rata basis (with channel(s) in each segment being disaggregated when and if necessary to provide each with its pro rata

share of the spectrum in each segment).

(4) *Safe harbor No. 4.* This safe harbor applies when an EBS licensee uses one or more of its channels for studio-to-transmitter links. The proponent may provide for one of the following options:

(i) The use of the LBS and/or UBS band for the point-to-point transmission of the EBS video or data (through superchannelization of the licensee's contiguous LBS or UBS channels), provided the proponent commits to retune the existing point-to-point equipment to operate on those channels or to replace the existing equipment with new equipment tuned to operate on those channels and the proposal complies with the LBS/UBS technical and interference protection rules;

(ii) The migration of the EBS programming to the MBS by retuning the existing point-to-point equipment to operate in the MBS or replacing it with equipment tuned to operate in the MBS; or

(iii) The replacement of the point-to-point link with point-to-point equipment licensed to the EBS licensee in alternative spectrum, so long as the replacement facilities meet the definition of "comparable facilities" set out in § 101.75(b) of this chapter.

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#### **§ 27.1233 Reimbursement costs of transitioning.**

(a) *Replacement downconverters.* The proponent(s) must install at every eligible EBS receive site a downconverter designed to minimize the reception of signals from outside the MBS.

(1) An EBS receive site is eligible to be replaced if:

(i) A reception system was installed at that site on or before the date the EBS licensee receives its Pre-Transition Data Request (see § 27.1231(d));

(ii) The reception system was installed by or at the direction of the EBS licensee;

(iii) The reception system receives EBS programming under § 27.1203(b) and (c) or is located at a cable television system headend and the cable

system relays educational or instructional programming for an EBS licensee; and

(iv) It is within the licensee's 35-mile radius GSA.

(2) Replacement downconverters must meet the following minimum technical requirements:

(i) The downconverter's input frequency range (the "in-band frequencies") must be 2572 MHz to 2614 MHz and output frequency range must be 294 MHz to 336 MHz;

(ii) The downconversion process must not invert frequencies;

(iii) The nominal gain of the downconverter must be 32 dB, or greater;

(iv) The downconverter must include filtering prior to the first amplifier that attenuates frequencies below 2500 MHz and above 2705 MHz by at least 25 dB;

(v) The downconverter must have an out-of-band input 3rd order intercept point (input IP3) of at least +9 dBm, where out-of-band is defined as all frequencies below 2566 MHz and all frequencies above 2620 MHz;

(vi) The downconverter must have a typical noise figure of no greater than 3.5 dB and a worst case noise figure of no greater than 4.5 dB across all in-band frequencies and across its entire intended operating temperature range;

(vii) The downconverter must not introduce a delta group delay of more than 20 nanoseconds for digital operations or 100 nanoseconds for analog operations over any individual six megahertz MBS channel.

(b) *Migration of Video Programming and Data Transmission Track.* (1) The proponent(s) must provide, at its cost, to each EBS licensee that intends to continue downstream high-power, high-site educational video programming or data transmission services, with one programming track on the MBS channels for each EBS video or data transmission track the licensee is transmitting on a simultaneous basis before the transition.

(i) To be eligible for migration, a program track must contain EBS programming that complies with § 27.1203 (b) and (c).

(ii) The proponent(s) must pay only the costs of migrating programming

tracks being transmitted on December 31, 2002 or within six months prior thereto.

(2) The proponent(s) must migrate each eligible programming track to spectrum in the MBS that will be licensed to the affected licensee at the conclusion of the transition.

(3) After the transition, the desired-to-undesired signal level ratio at each of the receive sites securing a replacement downconverter must satisfy the following criteria:

(i) *Cochannel D/U Ratio.* (A) When the post-transition desired signal is transmitted using analog modulation, the actual cochannel D/U ratio measured at the output of the reception antenna must be at least the lesser of 45 dB or the actual pre-transmission D/U ratio less 1.5 dB.

(B) When the post-transition desired signal will be transmitted using digital modulation, the actual cochannel D/U ratio measured at the output of the reception antenna must be at least the lesser of 32 dB or the pre-transition D/U ratio less 1.5 dB.

(C) Where in implementing the Transition Plan, the proponent(s) deploys precise frequency offset in an analog system, the minimum cochannel D/U ratio is reduced to 38 dB, provided that the transmitters have or are upgraded pursuant to the Transition Plan to have the appropriate "plus," "zero," or "minus" 10,010 Hertz precision frequency offset with a  $\pm 3$  Hertz (or better) stability.

(ii) *Adjacent Channel D/U Ratio.* The actual adjacent channel D/U must equal or exceed the lesser of 0 dB or the actual pre-transmission D/U ratio. However, in the event that the receive site uses receivers or is upgraded by the proponent(s) as part of the Transition Plan to use receivers that can tolerate negative adjacent channel D/U ratios, the actual adjacent channel D/U ratio at such receive site must equal or exceed -10 dB. Provided that the receive site receiver is not upgraded and cannot tolerate -10 dB, the adjacent channel D/U ratio would be 0dB.

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