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September 30, 2002

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Via Electronic Filing

Marlene H. Dortch, Secretary
Federal Communications Commission
455 12th Street, S.W.
Washington, D.C. 20554

Re: Notice of Ex Parte Presentation
Application of EchoStar Communications Corporation,
General Motors Corporation and Hughes Electronics Corporation,
Transferor; and EchoStar Communications Corporation, Transferee
(the Applicants), For Authority to Transfer Control;
CS Docket No. 01-348

Dear Ms. Dortch:

On behalf of our client, the National Rural Telecommunications Cooperative (NRTC), and pursuant to Section 1.1206 of the Commission's Rules, the attached supplemental response is provided in answer to Commission inquiries during a September 19, 2002 conference call between Commission staff and Dr. Paul W. MacAvoy of Yale University and Dr. Li Gan of the University of Texas.

During the September 19, 2002 conference call, a question was raised about Equation (1) in the August 30, 2002 "Response to the Applicants' Technical Analysis Of The EchoStar-Hughes Merger" prepared by Drs. Li Gan and Paul W. MacAvoy (hereafter EQ1). The question presented was whether NRTC's EQ1 accurately describes the nested logit model of demand relied on by Andrew Joskow and Robert Willig in their "Analysis of the EchoStar-Hughes Merger: Competitive Effects and National Pricing" dated July 2, 2002. The attached supplemental response confirms that EQ1 accurately describes the nested logit model relied on by Andrew Joskow and Robert Willig.

Please contact undersigned counsel if there are any questions.

Sincerely,

Jack Richards

cc: Simon Wilkie
James R. Bird
C. Anthony Bush
Neil A. Dellar
Barbara Esbin
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Gary M. Epstein
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Supplemental Response of Dr. Li Gan and Dr. Paul W. MacAvoy
September 27, 2002

During the September 19, 2002 conference call with FCC staff, a question was raised about Equation (1) in the August 30, 2002 "Response to the Applicants' Technical Analysis Of The EchoStar-Hughes Merger" prepared by Drs. Li Gan and Paul W. MacAvoy (hereafter EQ1). The question presented was whether our EQ1 accurately describes the nested logit model of demand relied on by Andrew Joskow and Robert Willig in their "Analysis of the EchoStar-Hughes Merger: Competitive Effects and National Pricing" dated July 2, 2002, by Andrew Joskow and Robert Willig (Joskow/Willig).

We will respond to the question in two parts. First, we show that EQ1 describes the nested logit model in Joskow/Willig. Second, we show that EQ1 is the same as Equation (25) in Berry (1994).

Part I:

According to the nested logit model of demand, illustrated on page 45 of Joskow/Willig, a consumer chooses his video service in two stages. At the first stage, he chooses among three service technologies, Antenna (*A*), Cable (*C*), and the DBS group that includes DIRECTV and EchoStar. If the DBS group is the choice in the first stage, the consumer then chooses between DIRECTV and EchoStar. In such a model, the probability of choosing DIRECTV or EchoStar is calculated by multiplying the probability of choosing the DBS group against the probability of choosing DIRECTV or EchoStar after the DBS group is chosen. To illustrate, consider the probability of choosing EchoStar s_E:

$$s_E = \bar{s}_{E|DBS}(\Delta,\sigma)\ \bar{s}_{DBS}(\Delta,\sigma) \qquad (1)$$

where $\bar{s}_{DBS}(\Delta,\sigma)$ is the probability of choosing the DBS group, and $\bar{s}_{E|DBS}(\Delta,\sigma)$ is the probability of choosing EchoStar after the DBS group is chosen. The probability of choosing EchoStar after the DBS group is selected is shown in (2):

$$s_{E|DBS} = \frac{e^{\Delta_E/(1-\sigma)}}{e^{\Delta_E/(1-\sigma)} + e^{\Delta_D/(1-\sigma)}} \qquad (2)$$

The probability of choosing the DBS group is shown in (3):

$$s_{DBS} = \frac{\left(e^{\Delta_E/(1-\sigma)} + e^{\Delta_D/(1-\sigma)}\right)^{1-\sigma}}{e^{\Delta_A} + e^{\Delta_C} + \left(e^{\Delta_E/(1-\sigma)} + e^{\Delta_D/(1-\sigma)}\right)^{1-\sigma}} \qquad (3)$$

The probability of choosing EchoStar is then:

$$s_E = \bar{s}_{E|ED}(\Delta,\sigma)\cdot\bar{s}_{ED}(\Delta,\sigma)$$
$$= \frac{e^{\Delta_E/(1-\sigma)}\cdot\left(e^{\Delta_E/(1-\sigma)}+e^{\Delta_D/(1-\sigma)}\right)^{-\sigma}}{e^{\Delta_A}+e^{\Delta_C}+\left(e^{\Delta_E/(1-\sigma)}+e^{\Delta_D/(1-\sigma)}\right)^{1-\sigma}} \qquad (4)$$

Equation (4) is precisely EQ1

Part II:

In Berry (1994), if product j is in group g, the probability of choosing product j is given in Equation (23):

$$\bar{s}_{j|g}(\delta,\sigma) = \frac{e^{\delta_j/(1-\sigma)}}{D_g} = \frac{e^{\delta_j/(1-\sigma)}}{\sum_{j\ni S_g} e^{\delta_j/(1-\sigma)}} \qquad \text{(23) in Berry (1994)}$$

This probability corresponds to the probability of choosing EchoStar where the DBS group is chosen in Equation (2). In Berry (1994), the probability of group g is given in Equation (24):

$$\bar{s}_g(\delta,\sigma) = \frac{D_g^{(1-\sigma)}}{\sum D_g^{1-\sigma}} \qquad \text{(24) in Berry (1994)}$$

Applying this equation to the Joskow/Willig nested logit model gives us Equation (3). The product of (23) and (24) in Berry (1994) gives the probability of choosing product j:

$$s_j(\delta,\sigma) = \bar{s}_{j|g}(\delta,\sigma)\cdot\bar{s}_g(\delta,\sigma) = \frac{e^{\delta_j/(1-\sigma)}}{D_g^{\sigma}\left(\sum D_g^{1-\sigma}\right)}$$
$$\frac{e^{\delta_j/(1-\sigma)}\cdot D_g^{-\sigma}}{\sum D_g^{1-\sigma}} \qquad \text{(25) in Berry (1994)}$$

Equation (25) in Berry (1994) is precisely the probability in (4), which is the same as EQ1

In summary, the Joskow/Willig nested logit model is described in EQ1, which is same as Equation (25) in Berry (1994).

We hereby certify under penalty of perjury that the foregoing is true and correct to the best of our knowledge, information and belief.

/s/

Li Gan

/s/

Paul W. MacAvoy

References:

Berry, Steven, "Estimating Discrete-Choice Models of Product Differentiation," The RAND Journal Economics 25 (Summer 1994): 242-62.

Gan, Li and Paul W. MacAvoy, "Response to the Applicants' Technical Analysis Of The EchoStar-Hughes Merger," August 30, 2002.

Joskow, Andrew and Robert Willig, "Analysis Of The EchoStar-Hughes Merger: Competitive Effects And National Pricing," July 2, 2002.