Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of Parts 2, 25 and 97 of the	)	ET Docket No. 98-142
Commission's Rules with Regard to the	)	
Mobile-Satellite Service Above 1 GHz	)	

OPPOSITION OF ICO GLOBAL COMMUNICATIONS

Pursuant to Section 1.429(f) of the Commission's rules, ICO Global Communications (Holdings) Ltd. ("ICO")[1] opposes the petition for reconsideration ("Petition") of the *NGSO MSS Feeder Link Order*[2] filed in the above-captioned proceeding by the Society of Broadcast Engineers ("SBE") on May 10, 2002.[3]

In the *NGSO MSS Feeder Link Order*, the Commission applied the coordination rules set forth in Parts 25 and 101 of the Commission's rules to gateway earth stations and fixed broadcast auxiliary service ("BAS") stations licensed in the 6875-7025 MHz ("7 GHz") band.[4] The SBE Petition requests the Commission to modify its coordination rules to provide that "the more burdensome Part 101 frequency coordination protocol only applies to 7 GHz TV BAS stations within 145 kilometers of an MSS downlink."[5] Commission grant of SBE's request would adversely impact ICO's feeder link operations in the 7 GHz band by exempting fixed BAS stations located beyond the proposed 145-kilometer zone from any coordination obligation and thus significantly increasing the potential for interference to the ICO U.S. gateway station.

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[1] ICO, a Delaware corporation, is the parent of ICO Satellite Services G.P., which is authorized to provide 2 GHz mobile satellite services in the United States.

[2] *See Amendment of Parts 2, 25 and 97 of the Commission's Rules with Regard to the Mobile-Satellite Service Above 1 GHz*, 17 FCC Rcd 2658 (2002) ("*NGSO MSS Feeder Link Order*"). All filings in ET Docket No. 98-142 will hereinafter be short cited.

[3] Public notice of SBE's Petition was published in the Federal Register on June 21, 2002. Oppositions must be filed within 15 days of the public notice of the Petition in the Federal Register. This opposition therefore is timely filed.

[4] *See NGSO MSS Feeder Link Order* at 2681 ¶ 55.

[5] SBE Petition at 1.

SBE bases its request entirely on the results of a May 2000 frequency coordination study conducted by Comsearch for Globalstar's Clifton, Texas, gateway feeder-link earth station. This report finds that the maximum great circle coordination distance for the Globalstar 5.5-meter earth station antenna(s), with an average horizon gain of 4.9 dBi, is 145 kilometers. ICO notes, however, that Comsearch also conducted a separate frequency coordination study for ICO's North American gateway station at Brewster, Washington, operated for ICO by Verestar, Inc., the results of which are attached hereto as Exhibit 1. In the ICO study, Comsearch determined that the ICO 7.6-meter antenna, with an average horizon gain of 4.5 dBi, has a maximum great circle coordination distance of 319 kilometers, which is significantly higher than for the Globalstar Clifton, Texas antenna.

The coordination distances for the two similar size antennas significantly differ by more than a 2-to-1 ratio in part because ICO's assumed parameter for the maximum permissible interference power at 7 GHz is more stringent than that assumed by Globalstar. Variations in coordination distances, which are subject to the particular characteristics of the stations being coordinated, are to be expected under the coordination process set forth in Sections 25.203, 101.21(f), and 101.103 of the Commission's rules. The *NGSO MSS Feeder Link Order* applies those rule sections to BAS stations in the 7 GHz band on an interim basis. These time-proven procedures for coordination of satellite earth stations and terrestrial fixed stations are based on Appendix S7 of the ITU Radio Regulations, as updated at WRC-2000 to accommodate coordination between fixed operations and non-geostationary satellite orbit ("NGSO"), fixed satellite service ("FSS") feeder-link earth stations.

SBE mistakenly assumes that Comsearch's calculation of the maximum coordination distance for a single Globalstar feeder-link earth station would apply equally to all other feeder-link earth stations, including those operated by the same MSS provider. The maximum coordination distance that is calculated for a receive earth station is based on a number of parameters *particular to that earth station*, including rain climatic zone, the gain of the earth

station antenna towards the horizon,[6] and the maximum permissible interference that the earth station will tolerate for a given percentage of the time. Thus, in addition to the different coordination distances that Comsearch obtained for the Globalstar gateway in Clifton and the ICO gateway in Brewster, Comsearch calculated that another Globalstar feeder-link earth station in Puerto Rico, has a maximum coordination distance of *519 kilometers*. These results demonstrate that variations in the earth station parameters can cause the coordination distance to vary over a wide range.

In addition to raising specious arguments to avoid time-tested, well-proven procedures for the coordination of satellite earth stations and terrestrial fixed stations, SBE seems to challenge the need to protect the entire feeder-link band (allocated as an FSS band) at 6700 – 7075 MHz. SBE argues that the coordination obligations of BAS licensees should be limited to MSS feeder link frequencies actually needed by MSS operators. The Commission previously rejected a similar argument, noting that "FSS and FS services have significantly different requirements for access to the electromagnetic spectrum in order to meet their business needs, and these needs must be recognized and accommodated in the context of the entire interference environment, in any rules that we adopt to address the perceived 'inequities.'"[7] Furthermore, as the Commission has pointed out, "[e]arth stations at the three sites [i.e., Globalstar's two grandfathered gateway earth stations and ICO's grandfathered gateway earth station] are already coordinated with existing broadcast licensees and thus should not pose an additional constraint to BAS operations."[8]

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[6] In the case of NGSO stations, this figure is the result of averaging, based on the consideration that the gain at the lowest elevation angle (usually ~ 5 degrees) is much lower than boresight gain, and on the fact that NGSO antennas spend a high percentage of the time tracking at much higher elevation angles because signals are handed off to other satellites before the antenna approaches the lowest limit of elevation tracking.

[7] *See FWCC Request for Declaratory Ruling on Partial-Band Licensing of Earth Stations in the Fixed-Satellite Service That Share Terrestrial Spectrum*, 17 FCC Rcd 2002, 2006-2007 ¶ 11 (2002). The Commission terminated its consideration of the issue of limiting the range of frequencies subject to coordination requirements to the bandwidth actually used by the satellite earth station, finding the record to be insufficient to support such limits on coordination. *Id.* at 2006-2008 ¶¶ 10-13.

[8] *NGSO MSS Feeder Link Order* at 2675-76 ¶ 39.

Under the *NGSO MSS Feeder Link Order*, new BAS transmit stations simply will be required to forward their particular station parameters to SBE frequency coordinators in order to complete the Part 25 and Part 101 coordination procedures, just as other fixed operators have done for years. If BAS licensees adhere to these procedures by providing the required coordination data to the affected earth station licensees or their designated frequency protection agents, they will facilitate the coordination process and should not find it burdensome.

On the other hand, the BAS licensees' failure to provide this data would be burdensome for ICO by depriving it of information necessary to prevent harmful interference to its feeder link operations. Moreover, when ICO conducted coordination of its gateway station in Brewster, it could not easily locate BAS stations and compile coordination data because prior to the *NGSO MSS Feeder Link Order* BAS licensees were not required to provide this data. As a result, ICO was forced to engage a frequency coordinator to conduct an independent survey of BAS receive site coordination data by directly contacting each entity named on a long list of SBE frequency coordinators in Washington state. Coordination of the ICO gateway station in Brewster thus could have been achieved with minimal expense and delay had BAS licensees been required to provide the requisite coordination data to ICO.

Based on the foregoing, ICO urges the Commission to promptly deny SBE's Petition.

Respectfully submitted,

/s/ Lawrence H. Williams

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July 8, 2002

EXHIBIT 1

COMSEARCH
19700 Janelia Farm Blvd.
Ashburn, Virginia 20147
(703) 726-5500

Earth Station Data Sheet

Company	VERESTAR, INC.	
Owner code		P9194
Earth Station Name, State		BREWSTER 1, WA
Call Sign		E990065
Latitude (DMS) (NAD83)		48 8 45.1 N
Longitude (DMS) (NAD83)		119 42 4.6 W
Ground Elevation AMSL (Ft/m)		1256.06 / 382.83
Antenna Centerline AGL (Ft/m)		16.01 / 4.88
Receive Antenna Type:	FCC32	FCC Reference 32-25LOG(THETA)
7.0 GHz Gain (dBi) / Diameter (m)		52.7 / 7.6
3 dB / 15 dB Half Beamwidth		0.20 / 0.37
Operating Mode		RECEIVE ONLY
Modulation		
Emission / Receive Band (MHz)		5K00G1W / 6975.0000 - 7075.0000
		5K00G7W / 6975.0000 - 7075.0000
		5K00G7D / 6975.0000 - 7075.0000
		75K0G1D / 6975.0000 - 7075.0000
		75K0G1W / 6975.0000 - 7075.0000
		75K0G7W / 6975.0000 - 7075.0000
		75K0G7D / 6975.0000 - 7075.0000
		25K0G7W / 6975.0000 - 7075.0000
		25K0G7D / 6975.0000 - 7075.0000
		250KG2D / 7011.0000 - 7013.0000
		250KG9D / 7011.0000 - 7013.0000
		250KG2D / 7071.9000 - 7073.9000
		250KG9D / 7071.9000 - 7073.9000
Max permissible Interference Power		
7.0 GHz, 20% (dBW/1 MHz)		-160.0
7.0 GHz, 0.0100% (dBW/1 MHz)		-150.0
Low Earth Orbit Satellite		
Azimuth Range (Min/Max) Degrees		0.0 / 360.0
Minimum Elevation Angle Degrees		5.0
Radio Climate		A
Rain Zone		5
Max Great Circle Coordination Distance (Mi/Km)		
7.0 GHz		198.2 / 319.0
Precipitation Scatter Contour Radius (Mi/Km)		
7.0 GHz		62.1 / 100.0
Reference Number (RCN)		99021705
F.C.C. Filing Number		MOD99082001423
P.N. Accepted for Filing date		
P.N. Granted Application date		03/10/2000
License Expiration date		06/24/2009
Status: LICENSED BY F.C.C.		

Earth Station Name BREWSTER 1 WA
Owner VERESTAR, INC.
Latitude (DMS) (NAD83) 48 8 45.1 N
Longitude (DMS) (NAD83) 119 42 4.6 W
Ground Elevation (Ft/m) 1256.06 / 382.83 AMSL
Antenna Centerline (Ft/m) 16.01 / 4.88 AGL
Antenna Model FCC Reference 32-25LOG(THETA)
Objectives: Receive -160.0 (dBW /1 MHz)

Azimuth (Deg)	Horizon Elevation Angle (Deg)	7.0 GHz Antenna Gain (dBi)	7.0 GHz Coordination Distance (Km)
0	0.00	4.50	319.0
5	0.62	4.50	319.0
10	0.61	4.50	319.0
15	0.63	4.50	319.0
20	1.18	4.50	319.0
25	1.28	4.50	319.0
30	0.30	4.50	319.0
35	0.29	4.50	319.0
40	0.89	4.50	319.0
45	0.95	4.50	319.0
50	1.07	4.50	319.0
55	1.10	4.50	319.0
60	1.36	4.50	319.0
65	1.64	4.50	319.0
70	1.72	4.50	319.0
75	2.00	4.50	319.0
80	2.19	4.50	319.0
85	2.29	4.50	319.0
90	2.59	4.50	319.0
95	2.50	4.50	319.0
100	2.47	4.50	319.0
105	2.21	4.50	319.0
110	1.84	4.50	319.0
115	1.69	4.50	319.0
120	1.68	4.50	319.0
125	1.34	4.50	319.0
130	0.75	4.50	319.0
135	0.43	4.50	319.0
140	0.30	4.50	319.0
145	0.00	4.50	319.0
150	0.00	4.50	319.0
155	0.00	4.50	319.0
160	0.00	4.50	319.0
165	0.00	4.50	319.0
170	0.00	4.50	319.0
175	0.00	4.50	319.0
180	0.00	4.50	319.0

Earth Station Name BREWSTER 1 WA
Owner VERESTAR, INC.
Latitude (DMS) (NAD83) 48 8 45.1 N
Longitude (DMS) (NAD83) 119 42 4.6 W
Ground Elevation (Ft/m) 1256.06 / 382.83 AMSL
Antenna Centerline (Ft/m) 16.01 / 4.88 AGL
Antenna Model FCC Reference 32-25LOG(THETA)
Objectives: Receive -160.0 (dBW /1 MHz)

Azimuth (Deg)	Horizon Elevation Angle (Deg)	7.0 GHz Antenna Gain (dBi)	7.0 GHz Coordination Distance (Km)
185	0.00	4.50	319.0
190	0.00	4.50	319.0
195	0.00	4.50	319.0
200	0.00	4.50	319.0
205	0.00	4.50	319.0
210	0.00	4.50	319.0
215	0.00	4.50	319.0
220	0.00	4.50	319.0
225	0.00	4.50	319.0
230	0.00	4.50	319.0
235	0.00	4.50	319.0
240	0.00	4.50	319.0
245	1.54	4.50	319.0
250	2.71	4.50	319.0
255	3.20	4.50	319.0
260	3.02	4.50	319.0
265	2.99	4.50	319.0
270	2.90	4.50	319.0
275	3.68	4.50	319.0
280	3.97	4.50	319.0
285	3.94	4.50	319.0
290	3.75	4.50	319.0
295	2.76	4.50	319.0
300	2.24	4.50	319.0
305	1.78	4.50	319.0
310	2.20	4.50	319.0
315	1.95	4.50	319.0
320	1.48	4.50	319.0
325	1.77	4.50	319.0
330	1.67	4.50	319.0
335	2.03	4.50	319.0
340	0.44	4.50	319.0
345	0.45	4.50	319.0
350	0.45	4.50	319.0
355	0.40	4.50	319.0

CERTIFICATE OF SERVICE

I, Gwendolynne M. Chen, do hereby certify that I have on this 8th day of July 2002, had copies of the foregoing **OPPOSITION OF ICO GLOBAL COMMUNICATIONS** delivered to the following via electronic mail or First Class U.S. mail:

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