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September 30, 1999

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Ms. Magalie Roman Salas
Secretary
Federal Communications Commission
445 12th Street, S.W.
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Washington, D.C. 20554

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Re: **Ex Parte**
IB Docket No. 99-81, RM-9328

Dear Ms. Salas:

ICO Services Ltd. ("ICO") submits the accompanying charts, depicting the disparate impact upon mobile satellite service ("MSS") operators of a Commission requirement that MSS systems operating at 2 GHz reimburse terrestrial service operators for costs incurred in relocating their equipment.

As ICO has pointed out in past filings in this proceeding, the impact of a relocation cost reimbursement requirement on MSS operators will be dramatically greater than the impact of such a policy on providers of personal communications service ("PCS"). Because PCS operators spread the cost of relocation reimbursement among a much larger base of customers and minutes of use than will be available to MSS systems, PCS licensees can more readily recover those costs from customers without unacceptable increases in end user rates. MSS operators, by contrast, likely will be forced to raise customer rates excessively and will be placed at a competitive disadvantage *vis-a-vis* other commercial mobile radio service ("CMRS") providers, including Big LEO systems that are not required to incur relocation costs.

The attached charts illustrate this disparate impact. Chart 1 assumes that both PCS and MSS customers will average 100 minutes per month of usage. For the PCS industry, this usage assumption is based on historic industry figures; for the MSS industry, the assumption is based on a published study by Lehman Brothers. At this assumed average rate of usage, and accepting actual customer totals for the U.S. PCS market published in *newaves* and projected customer totals for the global MSS market published by Merrill Lynch, the cost per minute to the U.S. MSS industry of reimbursing any of the several levels of relocation cost shown in the chart varies from

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33 to 141 times more than the cost to the PCS industry of reimbursing those same costs.¹

Chart 2 is based on the same facts and assumptions as Chart 1, except that Chart 2 assumes an average per-customer MSS usage of 50, rather than 100, minutes per month. This usage figure may be a more realistic expectation for MSS services generally. At this anticipated level of per-customer usage, the per-minute cost to the U.S. MSS industry of reimbursing any given level of relocation cost varies from 66 to 283 times more than the cost to the PCS industry of reimbursing those same costs.

As the Commission made clear in its *Emerging Technologies* decisions, balancing the interests of incumbent users of spectrum against the public's need for access to emerging technologies is a task that must be undertaken separately for each emerging technology service.² In the case of MSS operations at 2 GHz, neither the public interest, nor the Commission's imposition of relocation costs on PCS licensees, supports the creation of such a relocation reimbursement burden on MSS systems. Unlike PCS licensees, MSS operators cannot absorb relocation reimbursement costs without significantly raising prices for their customers. In fact, imposition of a relocation reimbursement obligation will act as a barrier to entry for all entrants into the U.S. MSS market, regardless of those entrants' financial qualifications.

¹ The number of customers projected in the chart for the U.S. MSS market is derived by making the conservative assumption that U.S. customers will represent 25% of the global MSS customer base.

² See *Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies*, 7 FCC Rcd 6886, 6890 (1992).

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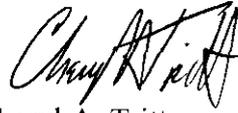
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Accordingly, if it requires 2 GHz MSS operators to reimburse the relocation expenses of terrestrial incumbents, the Commission should implement a compensation approach that accounts for the economic depreciation of equipment and provides for proper cost sharing between incumbents and MSS entrants.³

* * *

Pursuant to Section 1.1206(b)(1) of the Commission's rules, an original and one copy of this letter are provided to the Secretary for inclusion in the record.

Respectfully submitted,



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³ *But see* ICO's Petition for Further Limited Reconsideration of January 19, 1999 regarding the applicability of such a relocation policy to 2 GHz MSS applicants.

Chart 1 Impact of Relocation Costs in U.S. Satellite vs PCS

		amortized year of service	1 year 1997	2 years 1998	3 years 1999	4 years 2000	5 years 2001	6 years 2002
Subscribers - U.S. PCS market¹			1,170,000	3,480,000	9,980,000	15,270,000	20,790,000	26,080,000
estimated minutes	◎100 per month		1,404,000,000	5,148,000,000	11,976,000,000	18,324,000,000	24,948,000,000	31,296,000,000
accumulated minutes			1,404,000,000	6,552,000,000	18,528,000,000	36,852,000,000	61,800,000,000	93,096,000,000
Cost per minute	\$10M amortized		0.01	0.00	0.00	0.00	0.00	0.00
Cost per minute	\$20M amortized		0.01	0.00	0.00	0.00	0.00	0.00
Cost per minute	\$40M amortized		0.03	0.01	0.00	0.00	0.00	0.00
Cost per minute	\$100M amortized		0.07	0.02	0.01	0.00	0.00	0.00
Cost per minute	\$200M amortized		0.14	0.03	0.01	0.01	0.00	0.00
Cost per minute	\$400M amortized		0.28	0.06	0.02	0.01	0.01	0.00

		amortized year of service	1 year 1999	2 years 2000	3 years 2001	4 years 2002	5 years 2003	6 years 2004
Subscribers - Global MSS market²			33,000	511,000	1,065,000	1,691,000	2,538,000	3,375,000
USA - estimated proportion	25%		8,250	127,750	266,250	422,750	634,500	843,750
estimated minutes	◎100 per month ³		9,900,000	153,300,000	319,500,000	507,300,000	761,400,000	1,012,500,000
accumulated minutes			9,900,000	163,200,000	482,700,000	990,000,000	1,751,400,000	2,763,900,000
Cost per minute	\$10M amortized		1.01	0.06	0.02	0.01	0.01	0.00
Cost per minute	\$20M amortized		2.02	0.12	0.04	0.02	0.01	0.01
Cost per minute	\$40M amortized		4.04	0.25	0.08	0.04	0.02	0.01
Cost per minute	\$100M amortized		10.10	0.61	0.21	0.10	0.06	0.04
Cost per minute	\$200M amortized		20.20	1.23	0.41	0.20	0.11	0.07
Cost per minute	\$400M amortized		40.40	2.45	0.83	0.40	0.23	0.14

Multiplier effect	141 x	39 x	37 x	36 x	34 x	33 x
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Notes

1. As presented in Feb. 1998 issue of *Business Week*. Subscribers in PCS market include both TDMA and CDMA. 1997 figures include 40,000 subscribers from 1996
2. As presented by Merrill Lynch in April 14, 1999 issue of *Global Satellite Marketplace '99*, for a typical MSS system not required to make relocation payments
3. As presented by Lehman Brothers in Dec. 8, 1997 issue of *Cell Sites in the Sky - The Emerging Mobile Satellite Communications Industry*

Chart 1
USA cost per minute impact and multiplier effect, assuming 100 minutes per month of MSS usage
(See attached cover letter for further explanation)

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Chart 2 Impact of Relocation Costs In U.S. Satellite vs PCS

	amortized year of service	1 year 1997	2 years 1998	3 years 1999	4 years 2000	5 years 2001	6 years 2002
Subscribers - U.S. PCS market¹		1,170,000	3,480,000	9,980,000	15,270,000	20,790,000	26,080,000
estimated minutes	@100 per month	1,404,000,000	5,148,000,000	11,976,000,000	18,324,000,000	24,948,000,000	31,296,000,000
accumulated minutes		1,404,000,000	6,552,000,000	18,528,000,000	36,852,000,000	61,800,000,000	93,096,000,000
Cost per minute	\$10M amortized	0.01	0.00	0.00	0.00	0.00	0.00
Cost per minute	\$20M amortized	0.01	0.00	0.00	0.00	0.00	0.00
Cost per minute	\$40M amortized	0.03	0.01	0.00	0.00	0.00	0.00
Cost per minute	\$100M amortized	0.07	0.02	0.01	0.00	0.00	0.00
Cost per minute	\$200M amortized	0.14	0.03	0.01	0.01	0.00	0.00
Cost per minute	\$400M amortized	0.28	0.06	0.02	0.01	0.01	0.00

	amortized year of service	1 year 1999	2 years 2000	3 years 2001	4 years 2002	5 years 2003	6 years 2004
Subscribers - Global MSS market²		33,000	511,000	1,065,000	1,691,000	2,538,000	3,375,000
USA - estimated proportion	78%	8,250	127,750	266,250	422,750	634,500	843,750
estimated minutes	@50 per month	4,950,000	76,650,000	159,750,000	253,650,000	380,700,000	506,250,000
accumulated minutes		4,950,000	81,600,000	241,350,000	495,000,000	875,700,000	1,381,950,000
Cost per minute	\$10M amortized	2.02	0.12	0.04	0.02	0.01	0.01
Cost per minute	\$20M amortized	4.04	0.25	0.08	0.04	0.02	0.01
Cost per minute	\$40M amortized	8.08	0.49	0.17	0.08	0.05	0.03
Cost per minute	\$100M amortized	20.20	1.23	0.41	0.20	0.11	0.07
Cost per minute	\$200M amortized	40.40	2.45	0.83	0.40	0.23	0.14
Cost per minute	\$400M amortized	80.81	4.90	1.66	0.81	0.46	0.29

Multiplier effect

203 x	79 x	76 x	73 x	70 x	66 x
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Notes

- As presented in Feb. 1998 issue of *Business Week*. Subscribers in PCS Market include both TDMA and CDMA. 1997 figures include 40,000 subscribers from 1998
- As presented by Merrill Lynch in April 14, 1999 issue of *Global Satellite Markets* (see pg. 29) for a typical MSS system not required to make relocation payments

Chart 2
USA cost per minute impact and multiplier effect, assuming 50 minutes per month of MSS usage
(see attached cover letter for further explanation)

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