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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Instructional Telecommunications
Foundation, Inc.
P.O. Box 6060
Boulder, CO 80306

Telephone
(303) 442-2707

August 28, 2000

By Hand
Ms. Magalie Roman Salas
Secretary
Federal Communications Commission
445 - 12th Street, SW
Room TW-A325
Washington, DC 20554

Re: Amendment of the U.S. Table of Frequency Allocations to Designate The 2500-2520/2670-2690 MHz Frequency Bands for the Mobile Satellite Service - RM-9911

Petition for Rule Making of the Cellular Telecommunications Industry Association Concerning Implementation of WRC-2000: Review of Spectrum and Regulatory Requirements for IMT-2000 - RM-9920

Dear Ms. Salas:

Instructional Telecommunications Foundation, Inc., hereby submits for filing an original and eight (8) copies of its Opposition to Petitions for Rulemaking of the Satellite Industry Association and the Cellular Telecommunications Industry Association in the above-captioned proceedings.

Please date-stamp the additional copy of this filing and return it to the waiting messenger. If you have any questions concerning this filing, please do not hesitate to contact the undersigned.

Sincerely,

John B. Schwartz BTB

John B. Schwartz
President

Enclosures

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AUG 28 2000

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Amendment of the U.S. Table of Frequency Allocations to Designate The 2500-2520/2670-2690 MHz Frequency Bands for the Mobile-Satellite Service	)	RM-9911
Petition for Rule Making of the Cellular Telecommunications Industry Association Concerning Implementation of WRC-2000: Review of Spectrum and Regulatory Requirements for IMT-2000	)	RM-9920

To: The Commission

INSTRUCTIONAL TELECOMMUNICATIONS FOUNDATION, INC.
CONSOLIDATED OPPOSITION TO PETITIONS FOR RULEMAKING
OF THE SATELLITE INDUSTRY ASSOCIATION
AND THE CELLULAR TELECOMMUNICATIONS INDUSTRY ASSOCIATION

Summary

Instructional Telecommunications Foundation, Inc. ("ITF") hereby opposes the spectrum reallocation proposal submitted in the Petition for Rulemaking of the Satellite Industry Association ("SIA"). SIA proposes to reallocate frequencies which are extensively used for the delivery of educational video programming to universities, schools, libraries, and other locations by Instructional Television Fixed Service ("ITFS"). In addition, the Commission has revised the ITFS rules to allow both the commercial and educational use of ITFS frequencies for

terrestrial two-way high-speed data delivery; the initial filing window for two-way ITFS applications closed on August 18. Reallocation of ITFS spectrum, as proposed by SIA, would severely disrupt both the current uses of ITFS and the imminent addition of data services.

ITF further opposes the Petition for Rulemaking filed by the Cellular Telecommunications Industry Association ("CTIA"). We agree with CTIA that the Commission needs to begin the process of identifying spectrum for third generation mobile wireless purposes, and setting ground rules for making it available. However, the CTIA has put forward no concrete proposals that fulfill the prerequisites for a Notice of Proposed Rulemaking, and its petition thus must be rejected for failure to meet the requirements of Section 1.401(c) of the Commission's Rules. We urge that the Commission instead issue a Notice of Inquiry to develop a record that can form the basis for a subsequent rulemaking proceeding.

About ITF and its Instructional Operations

ITF is licensee of seven stations in the Instructional Television Fixed Service: WHR-509, Indianapolis; WHR-527, Philadelphia; WHR-512, Sacramento; WHR-511, Kansas City; WLX-699, Salt Lake City; WLX-816, Phoenix, and WLX-694, Las Vegas. These ITFS systems provide instructional service to primary and secondary schools. ITF serves both public and private schools, and has operated ITFS stations for more than a decade.

Over the years, ITF has taken on the mission of serving schools that have less available funding and fewer educational resources. For example, ITF's Philadelphia system has long served public schools in Camden, NJ, one of America's poorest school systems. In Las Vegas, ITF transmits to schools within correctional facilities or alternative education sites that are unable to take advantage of conventional instructional resources.

ITF's instructional program library contains over 275 hours of instructional programming. Almost all of this programming is age-specific. We offer material appropriate for pre-kindergarten through high school, as well as for teacher in-service training. Subjects include:

African American Studies
Art
Business
Foreign Language
Geography
Health
History
Language Arts
Math
Media Literacy
Public Speaking
Science
Social Studies
Special Education
Technology
Teacher Education
Women's Studies

A recent grid summarizing ITF's program library is attached as Exhibit A to this Opposition. More current and extensive information on ITF's instructional offerings can be found on

ITF's website at: http://www.itfitv.org/programming1.htm.

ITF generally licenses duplication rights which allow each school to make one copy of instructional series we air. The intention is that member schools be able to create their own educational programming library, making it more convenient for teachers to integrate video into their lessons.

ITF encourages its schools to make programming recommendations, and conducts quarterly surveys of schools to help us select instructional programming. We revise the contents of our instructional program library on an ongoing basis to keep current with schools' curricular needs and the state of knowledge in various academic fields.

In certain locations, notably Philadelphia and Sacramento, ITF has operated a telephone request line so that if a teacher needs a program aired immediately, he or she simply contacts the local playback engineer and orders it.

ITF provides its basic instructional program service, as well as receiving equipment, installation, and equipment maintenance service to schools without charge. (In the case of a relatively small number of instructional series, schools pay the program distributor directly for duplication rights, and ITF reimburses them for half the cost.) The instructional programs

in ITF's library contain no advertising.[1]

In addition, ITF offers supplementary materials to the teachers at these schools in an attempt to meet national educational standards and work with teachers to develop more compelling class lessons. These materials include printed teachers' guides to instructional video series. In certain instances, upon schools' request, ITF also has provided other support to assist teachers in the use of educational media. Such support has included donating videocassette recorders, television sets, and blank videotape.

While to date none of ITF's systems have been used for educational data delivery, we look forward to providing data services and training in the future for the school constituencies we have developed through years of instructional video work.

I. The Spectrum Reallocation Proposed by SIA Would Severely Disrupt ITFS Service.

The SIA Petition for Rulemaking seeks to have the following frequencies reallocated for Mobile-Satellite Service ("MSS"): 2500 through 2520 MHz and 2670 through 2690 MHz.

The SIA Petition fails to mention that the first of these bands today is occupied by ITFS channels A-1, B-1, A-2, and the

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[1] In certain locations, notably Phoenix, we also deliver full-time TV channels such as Discovery Science, Discovery Civilizations, and Classic Arts Showcase to schools. Some of these channels carry advertising.

lower one-third of B-2.[2] The second is occupied by the top two-thirds of ITFS channel G-3, MMDS channel H-3, ITFS channel G-4, and the I channels, which are shared among all licensees of ITFS and MMDS "main channels."[3]

ITFS main channel usage is widespread. According to a recent unofficial spreadsheet supplied by the Commission staff to the National ITFS Association, there are more than 2,400 outstanding ITFS licenses. Assuming that ITFS licenses are spread evenly among the five channel groups, nearly 1,000 licensed stations' main channels would be affected by the SIA proposal. All 2,400+ would be affected by the reallocation of I channels.

ITFS licensees include colleges, universities, school districts, religious organizations, primary and secondary schools, public television stations, non-profit organizations formed for the principal purpose of operating ITFS systems, and at least one state hospital association. Because video has been the principal use during the history of ITFS, these organizations typically transmit schedules of instructional programming to classrooms, workplaces, libraries, and the like.

Because the commercial use of ITFS excess capacity is

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[2] See Section 74.902(a) of the Commission's Rules.

[3] See Sections 74.902(a), 21.901(b)(6) and 74.939(j) of the Commission's Rules.

permitted, many ITFS systems also often carry commercial video programming of the type seen on cable TV systems. Because "wireless cable" video service has not been financially successful, the principal commercial use of excess ITFS capacity is expected to become two-way high-speed data delivery. The Commission has adopted rules allowing the transition to two-way ITFS data service. Filings in the rulemaking proceedings concerning two-way ITFS operation revealed strong support among educators for the evolution of the service toward data delivery, and expectations of significant educational applications of data service.

ITFS main channels are 6 MHz wide. This is the bandwidth required for analog video signals, still the predominant use of ITFS. As well, some ITFS channels are used for the delivery of compressed digital video, an application which also utilizes 6 MHz channels.

Most recently, the Commission authorized ITFS channels to be used for both upstream and downstream delivery of high-speed digital data. Because initial equipment for such data delivery is based closely upon cable modems, downstream data channels currently are designed to occupy 6 MHz channels. Upstream data channels typically are either 200 or 400 kHz wide, and they are most often delivered by subchannelizing main channels. I-channels are 125 kHz wide, although they can be combined into

wider channels through frequency swaps and superchannelization.

The most common spectrum plans for two-way data services call for either the highest or lowest frequencies in the ITFS/MMDS band to be used for "upstream" service from the user to the system's receivers (referred to as response station hubs).

ITF has not yet had the opportunity to assemble a complete picture of the two-way applications submitted during the recent filing window. Nonetheless, it is already clear that numerous ITFS and MMDS licensees applied to establish response station hubs on the A, B, G, and H main channel groups in cities such as Denver (G and H channels upstream), Phoenix (G and H channels upstream), San Francisco (A and B channels upstream), San Jose (A and B upstream), Indianapolis (A and B upstream), Providence (A and B upstream), Las Vegas (A and B upstream, and San Diego (A, B, G, and H upstream).[4]

I-channels also are expected to be used extensively for upstream purposes in two-way systems. In the recent filing window, ITF applied for I-channel authorizations in Philadelphia and Las Vegas. Roman Catholic religious organizations submitted numerous I-channel applications for various sites in the New York City area.

Because of the often low transmitting power levels involved,

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[4] To the best of ITF's information, the Commission has yet to assign file numbers to these applications. However, we have received service copies of many of them.

and the need to employ highly reliable links, Commission rules strongly protect ITFS and MMDS response station hubs from new interference sources.[5] SIA has adduced no evidence whatever that ITFS and MMDS upstream---or, for that matter, downstream---uses are compatible with the new satellite allocations it has proposed.

II. The CTIA Petition for Rulemaking Lacks the Specificity Which the Commission's Rules Require, and Therefore the Commission Should Issue a Notice of Inquiry on The Issues it Raises.

Section 1.401(c) of the Commission's Rules states in pertinent part that petitions for rulemaking "shall set forth the text or substance of the proposed rules, amendment, or rule to be repealed..." While the CTIA Petition for Rulemaking ("CTIA Petition") raises significant issues, it proposes no new rules, amended rules, or repealed rules, and thus cannot trigger a rulemaking proceeding.

Instead, CTIA's recommendation on ITFS and MMDS spectrum is far more general:

> CTIA is not aware of any initiative to study the domestic availability of the 2500-2690 MHz band by either the FCC or other appropriate forum. Therefore, CTIA urges the Commission to expedite the work on such studies and to establish mechanisms to allow U.S. industry to participate fully.
>
> CTIA strongly urges the Commission to consider all the relevant options for mobile services and for enhancing

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[5] See Section 74.939 of the Commission's Rules.

global spectrum harmonization before licensing any spectrum for next generation wireless services, including IMT-2000.[6]

ITF agrees that spectrum availability for third generation mobile services is an important communications policy issue. We agree with CTIA that all the options need to be carefully evaluated. However, we submit that the proper vehicle to pursue this objective at this stage is a notice of inquiry ("NOI"). A NOI would create a forum the Commission, industry stakeholders, academic researchers, and members of the public to develop the sorts of detailed studies that the CTIA Petition contemplates, and allow these parties subsequently to formulate proposals for specific rule changes.

Respectfully submitted,

INSTRUCTIONAL TELECOMMUNICATIONS FOUNDATION, INC.

By: _____

John B. Schwartz, President
P.O. Box 6060
Boulder, CO 80306
(303) 442-2707

Dated: August 25, 2000

[6] CTIA Petition, p. 10.

Exhibit A

SUBJECT	TITLE						GRADES								
		K	1	2	3	4	5	6	7	8	9	10	11	12	T
AFRICAN-AMERICAN STUDIES	In Black and White											x	x	x	
	Many Voices					x	x	x							
	Portraits: The Americans					x	x	x	x	x					
	The Road To Freedom											x	x	x	
	The Shadow of Hate										x	x	x	x	
ART	Art Reveals Culture								x	x	x	x	x	x	
	Arts and You(th)								x	x	x	x	x	x	
	Art's Place	x	x	x	x										
	Behind the Scenes				x	x	x	x	x	x					
	I Can Do Stuff				x	x	x	x							
	The Developing Image								x	x	x	x	x	x	
	I.M. Pei									x	x	x	x	x	
	Materials We Need		x	x	x										
	Portraits: The Americans					x	x	x	x	x					
	Real Life Design							x	x	x	x				
BUSINESS	E in Me Entrepreneur in You														
	One Million Postcards				x	x	x	x	x	x					
	Playing the Game										x	x	x	x	
	Video Clips								x	x	x	x			
FOREIGN LANGUAGE	*Carrascolendas*	x	x	x	x										
	Tito! El Tiburon														
	TOP! Auf Deutsch						x	x	x	x					
	TOP! En Espanol						x	x	x	x					
	TOP! En Francais						x	x	x	x					
GEOGRAPHY	The Great Age of Exploration										x	x	x	x	
	Great Lakes Alive							x	x	x	x	x	x	x	
	In Search of the Oregon Trail					x	x	x	x	x	x				
	Many Voices					x	x	x							
	NASA Connect Video Series						x	x	x	x	x	x	x	x	
	One Million Postcards				x	x	x	x	x	x					
	Our Fragile World						x	x	x	x					
	Our Water Planet from Space						x	x	x	x	x	x	x	x	
	Portraits: The Americans					x	x	x	x	x					
	US Geography from Sea to Shining Sea					x	x	x	x						
HEALTH	Ad-Libbing It	x	x	x	x	x	x	x	x	x	x	x	x	x	
	Drugs End All Dreams										x	x	x	x	
	Getting Along	x	x	x											
	Head To Toe	x	x	x	x										
	Looking From The Inside Out				x	x	x								x
	Many Voices					x	x	x							
	Our Human Body						x	x	x	x	x				
	Portraits: The Americans					x	x	x	x	x					
	Starting Small-Teaching Children Tolerance	x	x	x	x										x
	Tobacco Road: A Dead End							x	x	x	x	x	x	x	
	Working Together				x	x	x	x							
	Your Complete Guide to CPR							x	x	x	x	x	x	x	
LANGUAGE ARTS	ESL: Methods and Curriculum Design														x
	Getting Along				x	x	x	x							
	Great Expectations										x	x	x	x	
	In Black and White											x	x	x	x
	Magic Library	x	x	x	x										
	Portraits: The Americans					x	x	x	x	x					
	The Puzzle Place	x	x	x	x										
	Rabbit Ears-Classic Children's Literature	x	x	x	x	x	x								
	Read Alee Deed Alee	x	x	x											
	Reading Rainbow	x	x	x	x										
	Shakespeare: From Page To Stage										x	x	x	x	x

	Sixteen Tales	x	x	x	x	x	x	x							
SUBJECT	TITLE						GRADES								
		K	1	2	3	4	5	6	7	8	9	10	11	12	T
LANGUAGE ARTS	Testwise: The Smart Way to Prepare forTests							x	x	x					
	Video Clips								x	x	x	x			
	Where the Spirit Lives										x	x	x	x	
	Word Beginnings, Middles and Ends			x											
	Working Together				x	x	x	x							
MATH	Economics at Work										x	x	x	x	
	Eureka							x	x	x	x				
	I.M. Pei									x	x	x	x	x	
	Interactions Real Math Real Careers				x	x	x	x							
	Liftoff to Learning	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	Lines and Planes										x	x	x	x	
	Mathematics is Elementary		x	x	x										
	Mathica's Mathshop	x	x	x	x										
	Mathica's Mathshop 2	x	x	x	x										
	Mathmedia								x	x	x	x	x	x	
	Math Vantage							x	x	x	x				
	NASA Connect Video Series						x	x	x	x	x	x	x	x	
	Portraits: The Americans					x	x	x	x	x					
	Project Mathematics! Series										x	x	x	x	
	Reading Rainbow	x	x	x	x										
	Testwise: The Smart Way to Prepare forTests							x	x	x					
SCIENCE	America in Space: The First 40 Years									x	x	x	x	x	x
	Bio and Space Exploration	un	de	rg	rd	ua	te		&		gr	ad	ua	te	
	Critical Thinking: Day to Day							x	x	x	x				
	Cycles of Life: Exploring Biology										x	x	x	x	
	Eureka								x	x	x	x			
	Great Lakes Alive								x	x	x	x	x	x	
	Head To Toe	x	x	x	x										
	I.M. Pei									x	x	x	x	x	
	Inquiring Minds							x	x	x	x				
	Inquiring Minds Classroom Edition 2							x	x	x	x				
	Inquiring Minds Classroom Edition 3							x	x	x	x				
	Journey Through the Solar System								x	x	x	x	x	x	x
	Liftoff to Learning	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	Materials We Need		x	x	x										
	NASA Connect Video Series						x	x	x	x	x	x	x	x	
	Our Fragile World						x	x	x	x					
	Our Water Planet from Space						x	x	x	x	x	x	x	x	
	Portraits: The Americans					x	x	x	x	x					
	Reading Rainbow	x	x	x	x										
	Real Life Design				x	x	x	x							
	Spaces					x	x	x	x						
	Test Flights Beyond the Limits								x	x	x	x	x	x	x
	Testwise: The Smart Way to Prepare forTests							x	x	x					
	World in the Balance										x	x	x	x	
SOCIAL STUDIES/HISTORY	*Across Cultures*							x	x	x	x	x	x	x	
	The Age of Reason: Europe After the Renaissance								x	x	x	x	x	x	
	The Almost Painless Guide to Government Branches						x	x	x	x	x	x	x	x	x
	The American Hero Show		x	x	x	x	x	x	x	x	x	x	x	x	
	America in Space: The First 40 Years								x	x	x	x	x	x	x
	Art Reveals Culture								x	x	x	x	x	x	
	The Black Death								x	x	x	x	x	x	
	Critical Thinking: Day to Day							x	x	x	x				
	The Dark Ages: Europe After the Fall of Rome								x	x	x	x	x	x	
	Exploring the Renaissance								x	x	x	x	x	x	
	The Great Age of Exploration										x	x	x	x	

	I.M. Pei									x	x	x	x	x	
	The Industrial Revolution								x	x	x	x	x	x	
SUBJECT	TITLE						GRADES								
		K	1	2	3	4	5	6	7	8	9	10	11	12	T
SOCIAL STUDIES/HISTORY	Liftoff to Learning	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	Many Voices					x	x	x							
	Midieval Times: Life in the Middle Ages						x	x	x	x	x	x	x	x	x
	My America		x	x	x	x	x	x							
	The New Americans			x	x	x	x	x	x	x	x	x	x	x	
	The New Voice									x	x	x	x	x	
	One Million Postcards				x	x	x	x	x	x					
	The Oregon Trail					x	x	x	x	x	x				
	Pearls										x	x	x	x	
	Portraits: The Americans					x	x	x	x	x					
	The Protestant Reformation										x	x	x	x	
	Religions of the World								x	x	x	x	x	x	x
	The Road To Freedom											x	x	x	
	The Shadow of Hate										x	x	x	x	
	Sixteen Tales	x	x	x	x	x	x	x							
	South By Northwest					x	x	x	x	x	x	x	x	x	
	Starting Small- Teaching Children Tolerance	x	x	x	x										x
	Test Flights Beyond the Limits								x	x	x	x	x	x	x
	Women in American Life									x	x	x	x	x	x
	The World of Ancient Rome								x	x	x	x	x	x	
	World In the Balance										x	x	x	x	
TECHNOLOGY	Bio and Space Exploration	un	de	rg	rd	ua	te		&		gr	ad	ua	te	
	I.M. Pei									x	x	x	x	x	
	Internet Series					x	x	x	x	x	x	x	x	x	x
	Journey Through the Solar System								x	x	x	x	x	x	x
	Liftoff to Learning	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	NASA Connect Video Series						x	x	x	x	x	x	x	x	
	Portraits: The Americans					x	x	x	x	x					
	Real Life Design				x	x	x	x							
	Spaces														x
	Technology For Teachers														x
WOMENS STUDIES	Portraits: The Americans					x	x	x	x	x					
	Women in American Life									x	x	x	x	x	x
IN SERVICE	ESL: Methods and Curriculum Design														x
	Learn and Live														x
	Looking From The Inside Out				x	x	x								x
	Teaching For Results	x	x	x	x	x	x	x	x	x					x
	Technology For Teachers							x	x	x	x	x	x	x	x
	A Tutors Workshop														x
LEARNING DISABILITIES	A Tutors Workshop														x
	TITLE			CITIES LICENSED											
		C	P	D	M	LV	I	KC	S	SL	PX	PL			
ANNENBERG	Art of the Western World	x									x				
	College Algebra										x				
	Constitution	x		x	x						x				
	Destinos I	x		x	x	x	x	x			x				
	Destinos II	x		x	x	x	x	x			x				
	French in Action	x									x				
	French in Action II	x									x				
	Literary Visions	x		x							x				
	The Western Tradition	x				x					x				
	The Western Tradition II	x				x					x				
	The World of Abnormal Psychology	x									x				
	C=Chicago P=Portland D=Denver M=Minneapolis LV=Las Vegas I=Indianapolis														

	KC=Kansas City S=Sacramento SL=Salt Lake City PX=Phoenix PL=Philadelphia

Certificate of Service

I, John Schwartz, hereby certify that the foregoing Consolidated Opposition to Petitions for Rulemaking was served this 25th day of August, 2000, by depositing a true copy thereof with the United States Postal Service, first-class prepaid, addressed to the following parties:

The Satellite Industry Association
225 Reinekers Lane, Suite 600
Alexandria, VA 22314

Cellular Telecommunications Industry Association
1250 Connecticut Ave., NW, Suite 800
Washington, DC 20036

John Schwartz