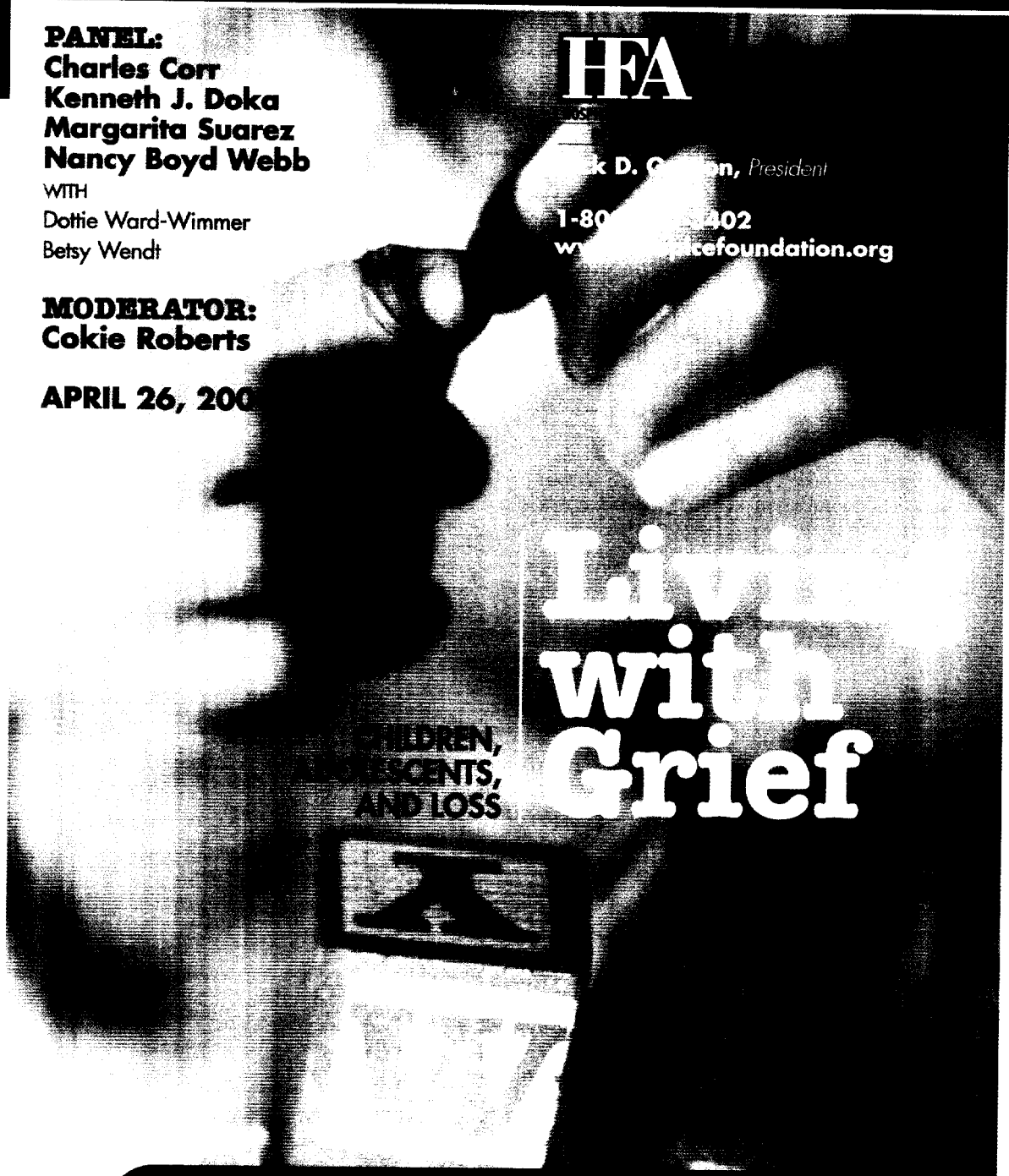
# EXHIBIT G

# ATTACHMENT B

# Hospice Foundation of America

## Seventh Annual National Bereavement Teleconference




**PANEL:**
**Charles Corr**
**Kenneth J. Doka**
**Margarita Suarez**
**Nancy Boyd Webb**
WITH
Dottie Ward-Wimmer
Betsy Wendt

**MODERATOR:**
**Cokie Roberts**

**APRIL 26, 200**

**Sponsored by:**
**Project on Death in America of the Open Society Institute**
**Veterans Health Administration Office of Information, Department of Veterans Affairs**
**Foundation for End of Life Care**

In Cooperation with:
Annenberg/CPB, funders of "Death: A Personal Understanding"
Association for Death Education and Counseling
John Hancock
The Compassionate Friends

CATHOLIC TELEMEDIA NETWORK
324 Middlefield Road
Menlo Park, CA 94025

## Thank You

I want to welcome you to Hospice Foundation of America's seventh annual National Bereavement Teleconference. You join an audience of more than 150,000 people at sites all across North America to learn more about ways to assist children and adolescents with loss and grief. Healthcare professionals, educators, counselors, parents and others concerned about young people are gathered together to make up one of our most diverse audiences ever.

Today, we will explore the many ways loss and grief can affect our children and discuss interventions that can empower young people with effective coping skills. Hospices have long understood the impact of grief and loss on children and adolescents. Many offer support groups and other special programs for youth, and the number of independent grief centers for young people grows each year. Hospice Foundation of America is pleased to address this important topic and serve as a resource for so many communities.

On behalf of Hospice Foundation of America, I would like to extend our thanks and gratitude to our esteemed panel members and to our moderator, Cokie Roberts. I also wish to thank the sponsors and contributing organizations who have helped us not only with their financial support but with their community involvement and outreach. Thanks, too, to all the local organizations, site coordinators, volunteers and helpers who bring this program to more than 2,000 communities across the country; without your efforts, this teleconference would not be possible.

**Jack D. Gordon,** *President*
Hospice Foundation of America

## Learning Objectives

At the conclusion of this session, participants will be able to:

1. Discuss the ways that understandings of death and loss develop through childhood and adolescence;
2. Describe the ways that the grief of children and adolescents is similar to and different from the responses of adults;
3. Describe the role of death education in assisting children and adolescents to develop skills and understandings that may facilitate adaptation to loss;
4. List and describe six interventive techniques that can be used with children and adolescents;
5. Describe the ways that violent and traumatic loss can complicate the grief of children and adolescents and discuss preventive and interventive strategies.

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## The Panel

**Cokie Roberts** has served as moderator for every Hospice Foundation of America teleconference since 1994. She is currently an anchor on *This Week With Cokie Roberts and Sam Donaldson*, the Chief Congressional Analyst for ABC News, and a national correspondent for National Public Radio.

**Nancy Boyd Webb,** DSW, BDC, RPT-S, is a leading authority on play therapy with children who have experienced trauma and loss. She has been a professor at Fordham University Graduate School of Social Service since 1979 where she established the Post-Master's Certificate Program in Child and Adolescent Therapy. She maintains a clinical practice and supervises and consults with schools and agencies.

**Charles Corr,** PhD, is Professor emeritus in the Department of Philosophical Studies at Southern Illinois University, a member of the Executive Committee of the National Donor Family Council, and a former Chairperson of the International Work Group on Death, Dying and Bereavement. Dr. Corr was seen on HFA's second annual National Bereavement Teleconference, *Children Mourning, Mourning Children*.

**Kenneth J. Doka,** PhD, is Senior Consultant to HFA and a professor of gerontology at the College of New Rochelle in New York. He is an ordained Lutheran Minister, former Chair of the International Work Group on Death, Dying and Bereavement and past President of the Association for Death Education & Counseling. Dr. Doka serves as associate editor of *Omega* and editor of *Journeys*, a newsletter for the bereaved published by Hospice Foundation of America.

**Margarita Suarez,** RN, PNP, MA, holds credentials as a registered nurse, pediatric nurse practictioner, and counselor. She emigrated from Cuba in the 1960s and served in the Army Nurse Corps during the Vietnam War. She is Executive Director of AVANTA, The Virginia Satir Network, which is an educational organization whose mission is to support, connect and empower people through the Satir Growth Model.

JOINING THIS YEAR'S PANEL ARE:

**Dottie Ward-Wimmer**, RN, MA, LPC, RPT-S, has been working with young people and their families for over thirty years and currently serves as Director of the Children's Program at the Wendt Center for Loss and Healing in Washington, DC.

**Betsy Wendt,** MA, has been both a teacher and counselor in the DC Public School System. She currently works as the bilingual counselor at H.D. Cooke Elementary School in the neighborhood of Adams Morgan where she is an active community member.

# Program Agenda

### Segment I:
### The World of Children and Adolescents

1. Children and adolescents experience a wide range of losses, encompassing not only the deaths of significant persons, but divorce, relocation, pets, and other losses.
2. Since children and adolescents continue to develop, their cognitive, psychosocial, emotional and spiritual development will influence their responses to loss.
3. Cultural, social and personal factors will also influence the ways that children and adolescents adapt to loss.
4. Schools play a critical and multifaceted role in the lives of children and adolescents. They have a major role in helping children and adolescents adapt to loss.

### Segment II:
### Grief Among Children and Adolescents

1. Grief in children and adolescents shares many similarities with the ways grief is experienced by adults. Like adults, grief is manifested cognitively, emotionally, physically, behaviorally and spiritually. And, like adults, this grief can be a long process.
2. Yet, grief is experienced differently by children and adolescents. Among the differences is that periods of grief can be short and intermittent. As children continue to develop, they may understand additional aspects of the loss, renewing periods of grief. And they are likely to address the loss once again in light of new formative developmental tasks.
3. Grief in adolescence can be intertwined with developmental issues such as discomfort over differences, reliance on peers, concerns about being overwhelmed by strong grief reactions, reluctance to appear vulnerable, and reluctance to seek adult support.
4. Children and adolescents who exhibit certain behaviors that suggest danger to self or others or impaired long-term functioning should be evaluated by a qualified professional. In certain situations, too, such as suicide, homicide, or traumatic loss, professional evaluation can be helpful.

### Segment III, Part I:
### Helping Children and Adolescents

1. Children and adolescents derive support from a wide variety of persons—parents, guardians, relatives and peers, schools, community-based organizations and counselors.
2. Parents and guardians have vital roles in modeling grief and offering support. Their own ability to offer support, however, might be impaired by their own grief.
3. Schools, too, can have vital roles in assisting and supporting grievers, assessing the ways a child or adolescent is functioning, and offering referrals to other community-based organizations.
4. Schools and other community-based organizations ought to consider ways to be involved appropriately in prevention, intervention, and postvention activities.

### Segment III, Part II:
### Helping Children and Adolescents, cont.

1. Helpers need to be eclectic in their approach to grieving children. They should design interventive approaches based on their assessment of the individual child. Approaches used should build on the child or adolescent's adaptive strengths, and be respective of the child or adolescent's culture and values.
2. Children and adolescents may especially benefit from expressive approaches that use modalities such as play, dance or drama, storytelling or art in therapy.
3. Meaningful involvements in ritual, at the time of the loss and later, are likely to be helpful.
4. Support groups may be very useful for children and adolescents in normalizing grief and assisting adaptation.

### Segment IV:
### Special Situations—Traumatic and Violent Loss

1. Trauma is an unpredictable event outside of the range of normal experiences that challenges assumptions of personal and collective safety.
2. Traumatic events entailing complicating factors, including sudden and multiple losses, have their own unique aspects such as unsettling images of the loss and a loss of personal safety.
3. Traumatic events require specific techniques such as debriefing. In any case, traumatic events have to be addressed, along with, some say prior to, considerations of loss.
4. Counselors assisting individuals who have experienced traumatic loss need both special training and ongoing supervision to avoid retraumatizing victims and to assist them in dealing with secondary traumatization.

### Segment V: Concluding Points

EDUCATION:

1. Education about loss and death helps children and adolescents prepare for life. Education can help children and adolescents respond more effectively to circumstances of loss by normalizing grief reactions, teaching ways of adapting to loss, and assisting children and adolescents in supporting others.
2. Because loss and death occur in all types of situations and in different places, the responsibility for death education is shared by parents and guardians, schools, places of worship and other community organizations.

SELF CARE:

1. Working with children and adolescents can cause particular issues for helpers, necessitating effective self-care and systems of support and supervision.

*Note: There will be two question and answer periods.*

# Courtesy Film Clips

*Select film clips have been provided courtesy of:*

***ER,*** Warner Brothers Television

***Get Real,*** 20th Century Fox Television, Clyde Phillips Productions

***Death: A Personal Understanding,***
Annenberg/CPB, 1-800-LEARNER

***Techniques in Play Therapy,*** Guilford Press, 1-800-365-7006

**The Dougy Center**

***Teen Grief:*** **Climbing Back,**
Hospice of Metro Denver, Denver Center Media

***Choosing To Survive,*** The Hospice of the Florida Suncoast

***Kids to Kids*** Calvary Hospital

# Hospice Foundation of America Order Form

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❑ 1998 - Living With Grief: Who We Are, How We Grieve
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| ❑ Choosing Hospice: A Consumer's Guide | 100 | $35.00 |
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# DECLARATION OF MICHAEL MCGEE
# DIOCESE OF DALLAS

I, Michael McGee, being over 18 years of age and competent to make this declaration, hereby declare as follows:

1. I am the Director of the Archbishop Sheen Center for Communications at the Catholic Diocese of Dallas, Texas. The Diocese of Dallas serves over 600,000 Catholics. As Director, I have the responsibility of supporting through television communications systems and information technology the educational and religious needs of this concentrated and diverse population of Dallas.

2. The Diocese of Dallas started using Instructional Television Fixed Services ("ITFS") in 1988 to improve the quality of educational opportunities for the students in our elementary schools. This service has helped to improve and diversify the instruction our students receive. The spiritual programming we provide to a number of cable channels through our ITFS system over the years has been instrumental in assisting people with family and other personal problems as well as those seeking spiritual growth.

3. Today, the Diocese's ITFS channel is used to educate 1,500 children and young adults who attend Catholic schools in Dallas. The Diocese's ITFS channel is used full-time during the day to deliver educational and instructional programming to 10 schools. It is also used part-time in the evening to downlink via satellite Town Meetings from Washington, D.C. and other offerings.

4. Currently the Diocese's digital broadcast studio in Oak Cliff broadcasts math, science, language arts and English skills programming from the local PBS station which comes complete with materials to aid the students' learning experience, as well as teacher programming guides and lesson plan assistance. The Diocese downlinks a special series of science and math programs from Satellite Educational Resources Consortium ("SERC") and the NASA Why Files along with history adventures from the Colonial Williamsburg Project. In total the Diocese of Dallas has built its own programming library of over 1,000 instructional videos. It can rebroadcast them to any school at virtually any time, thus helping teachers to keep curricula and student learning on schedule.

5. There is a price for the Diocese's work. It costs approximately $65,000 each year to maintain and operate the Diocese's ITFS system and to develop the necessary programming for its students and the community. Fortunately, the Diocese has been able to forge a strategic alliance with WorldCom to defray some of these costs. WorldCom leases a portion of the Diocese's ITFS channel capacity and, in return, pays the Diocese minimum monthly fees. WorldCom also provides vital technical and operational services to the Diocese in connection with its ITFS system. If WorldCom's revenues and support services were to disappear, the Diocese would almost certainly have to curtail dramatically or shut down its ITFS operation.

This shared network is also the main reason that the Diocese of Dallas will be able to expand its current service to all of its 37 parochial schools.

6. In conjunction with WorldCom the Diocese plans to install digital receivers in all of its 37 parochial schools within the next 60 to 90 days, increasing the number of students served by the ITFS system to 8,000. The Diocese also plans to begin creating its own programming after all the schools are linked to the ITFS system. These programs will provide increased educational programming for our students as well as in-service for our teachers. This in-service programming will include computer software training for teachers. With 40% of the Diocese made up of Hispanics, the Diocese also plans to begin broadcasting bilingual programming to the schools in SAP. This will assist not only students but also parents, allowing them to become more actively involved in their children's education. It will also open the door to English as Second Language courses for adults. Programming such as this will also positively impact the growing Vietnamese population in the Diocese.

7. While the Diocese has made significant use of its ITFS channel, what is of crucial importance now is the conversion of its system to two-way, broadband use. Because of recent rule changes adopted by the Federal Communications Commission, the Diocese has the unique opportunity to provide improved educational services at reduced costs.

8. With the assistance of WorldCom, we plan on updating our ITFS system by converting to two-way, fixed broadband use. This will give the Diocese the ability to offer schools new services such as high-speed Internet access and other data services.

I declare under penalty of perjury that the foregoing is true and correct.

Michael McGee
Director
ABP. Sheen Center for Communications
Catholic Diocese of Dallas

Executed on February 20, 2001

**Minutes**
**2500-2690 MHz Working Group**
**January 16, 2001**

I. Agenda was approved.
II. Meeting minutes from December 19 were approved.
III. Review of Issues from December 19 Meeting

Sharing

One representative from IIT asked if "cooperative sharing" on a time or geographical basis was possible and asked whether existing ITFS users could be allowed to provide mobile as well as fixed in the 2500-2690 band. A representative of Sprint responded that the FCC Interim report's sharing analysis showed that sharing between 3G and MDS was impossible. Additionally, he noted that Sprint was not contemplating mobile use in 2500 band due to its current mobile operations in the PCS band. A representative of Nucentrix noted that the FCC NPRM raises the question of whether a mobile allocation should be considered for this band. A representative of WCA responded that there was inadequate spectrum in the band to support robust fixed wireless access and 3G simultaneously. A representative of Verizon noted that question of whether there is sufficient spectrum to support 3G in the 2500-2690 MHz would depend on whether additional spectrum for 3G was found in other bands that could be paired with any spectrum allocated from 2.5GHz, noting that he does not consider the 90 MHz mentioned in the FCC Spectrum Policy statement to be enough. He also noted that sharing with 3G did not seem possible, especially on a time basis.

Current and Future Build Out of Incumbent Systems

A representative of Verizon stated that it is necessary to determine the number of incumbent stations in the band, the extent to which the ITFS bands are being used for educational services versus other uses, and how much of the spectrum in the band is being used for MDS. He noted that this information is necessary to support the statement in the FCC report that incumbent operators face significant technical and economic difficulties in relocating and asked that this response be substantiated with quantifiable information. The representative of WCA noted that there is an FCC database on the FCC's website that lists the licenses for the band and the number of station deployed. The working group discussed whether this information would be made available in the FCC Final Report and an FCC representative noted that the FCC will make whatever information is has available, but that it cannot compel incumbent operators to provide information on deployment and actual uses.

Relocation Spectrum

A representative of Sprint noted that incumbents would need replacement spectrum below 3GHz. A representative of IIT questioned whether replacement spectrum needed to be below 3GHz as the service was a line-of-sight service. A Verizon representative noted that replacement spectrum could be above 3GHz as limited research showed that ITFS pathlengths are 10 miles and MDS pathlengths are 30 miles. A representative of WCA responded that this ignored the commercial uses of these systems.

The group turned back to the earlier discussion of providing information on the current and future build out of incumbent systems. Some participants noted that it would be helpful in determining how much and what kind of relocation spectrum would be needed, if incumbent users were moved. A representative from Nortel noted that contracts for systems to be built out in the next 12-24 months should be included in this analysis.

More on Sharing and Separation Distances

In response to a question from NTIA, it was clarified that the FCC Interim Report includes sharing with both analog and digital incumbent systems. A representative of IIT asked if the FCC Final Report would include analysis of interference into 3G. A representative of Sprint noted that regardless of which direction interference went, there was still interference, which precluded sharing. A representative of Cingular agreed with Sprint, adding that his company had looked at preliminary sharing studies and believed that sharing between ubiquitous mobile and ubiquitous fixed systems would not be possible, particularly from a business model perspective. A representative of Verizon also noted that co-channel sharing was not feasible and suggested focusing on adjacent channel sharing and band segmentation. The representative of IIT stated that there still might be value to looking at interference analysis and mitigation methods, noting that NTIA was continuing to look at full band sharing in its report.

A representative of IIT asked if the issue of separation distances would be addressed in the FCC's Final Report. The FCC responded that there was a process for providing comments and information on the Final Report.

Relocation Bands

In response to the decision taken at the December 19th meeting to identify candidate bands for relocation of incumbent users, a representative of Verizon listed two candidate frequency ranges above 3GHz (noting that very high frequency bands were not an option, but that bands above 3 GHz might be) as possibilities: 3650-3700 MHz and 3940-3990 MHz. Verizon noted that the amount of spectrum available would depend on incumbent uses in these bands. A representative of NTIA noted that ITU-R Working Party 8F was studying bands above 3 GHz for systems "beyond IMT-2000".

The group spent some time on additional discussion of identifying the actual incumbent uses in the 2500-2690 MHz band. A representative of Verizon noted that it would be helpful to identify which systems were being used for ITFS versus which systems were supporting MMDS, noting that if ITFS licensees were leasing spectrum to MMDS, this indicates that they do not need the spectrum for educational purposes. A representative of WorldCom responded that this assessment ignored the symbiotic relationship of ITFS/MDS.

A representative of Arraycom stated that for fixed wireless services, such as MDS, the operators might consider shrinking cell sizes as penetration increases. A representative of Sprint responded that this would not be economical if MDS was to compete against DSL and cable. A representative of WorldCom noted that it could not consider scrapping existing equipment once it had a full load of customers.

Returning to Verizon's question of what amount of ITFS spectrum is leased, a representative of Sprint responded that Sprint leases as much ITFS spectrum as it can get, depending on the market. He noted that Sprint is providing or plans to provide two-way services in 10 markets and will lease ITFS spectrum in two of those markets for downlink capacity. A representative of WCA noted that every ITFS lease is filed with the FCC in paper form. Noting that statements by some ITFS licensees indicates that some may seek symbiotic relationships with 3G or others besides MDS, the representative of Verizon asked if the reliance on leasing arrangements and secondary markets is good for operators in the long term. He stated that he did not consider this ideal from an operators' perspective. A representative of Sprint responded that the MDS community had learned to live with these arrangements and stated again that sharing between fixed and mobile was not feasible. A representative of IIT asked if sharing might be possible when an operator provides multiples services (i.e. fixed and mobile) instead of different services being provided by different operators.

Relocation Costs

A representative of NTIA, noting that NTIA is attempting to estimate costs of relocating incumbent users at 2003/2006/2010, indicated that it would be helpful for the FCC to estimate costs at those dates for incumbent users in the 2500-2690 MHz for the sake of comparison. A representative of Sprint responded that the FCC had yet to find comparable replacement spectrum and that relocation costs could not be quantified until that spectrum was identified. The NTIA representative noted that NTIA had made estimates without information on replacement spectrum. A DoD representative added that it is challenging to determine the difficulties in moving without information on costs.

Future Meetings

Future meetings are scheduled for January 31st and February 14th. The co-chairs noted that there will not be an additional meeting of the 2500-2690 MHz Working Group unless written contributions are submitted prior to the January 31st meeting and requested participants to provide written contributions as soon as possible.

J

EXHIBIT J

# Catholic Telvision Network

## Joint Engineering Exhibit in Support of Comments to ET Docket 00-258 (Third Generation Wireless Systems)

February 20, 2001



HAMMETT & EDISON, INC.
CONSULTING ENGINEERS
SAN FRANCISCO

# Joint Engineering Statement of John F.X. Browne, P.E., Robert W. Denny, Jr., P.E., and Dane E. Ericksen, P.E.

The firms of John F.X. Browne and Associates, P.C., Denny & Associates, P.C., and Hammett & Edison, Inc., have been retained jointly on behalf of the Catholic Television Network ("CTN"), representing numerous Instructional Television Fixed Service ("ITFS") stations licensed to, and operated by Roman Catholic Archdioceses and Dioceses throughout the United States, in support of CTN comments to ET Docket 00-258 concerning reallocation of spectrum in the 2.5 GHz ITFS/MMDS band to third generation ("3G") wireless services.

## Frequency Re-Use vs. Frequency Sharing vs. Frequency Leasing

1. We must first ensure that no confusion exists between the similar terms frequency re-use, frequency sharing, frequency leasing, and band re-allocation. These four cases can be defined as follows:

1A. "Frequency Re-Use" applies when two or more users can engineer their use of a common frequency so that the level of the first user's signal (the "desired" or "D" signal) is sufficiently stronger than the second user's signal (the "undesired" or "U" signal), that no interference is caused to either user. Point-to-point microwave links, using distance separation, highly directive parabolic transmitting and receiving antennas, favorable path geometries, and sometimes terrain obstruction blockage, are excellent examples of frequency re-use. Such frequency re-use is typically only possible between fixed links or systems separated by wide geographical distances.

1B. "Frequency Sharing" applies when the simultaneous use of the same frequency by both users would result in interference. If the time periods of needed use are different, a sharing arrangement can then become practical. A good example is the shared use of the limited number of 2 GHz TV broadcast auxiliary service ("BAS") frequencies between local TV stations and network sports users: local electronic news gathering ("ENG") is typically most heavily used during weekday periods, whereas network sports often make the heaviest use of those frequencies on weekends and holidays. Thus, time sharing is often possible and practicable.

1C. "Frequency Leasing" applies when a given user has "excess capacity" and can therefore lease such excess capacity to a third party user. This leased bandwidth then becomes unavailable to the primary licensee for the duration of the lease. One example is, of course, ITFS licensees leasing one or more of their channels to an MMDS "wireless cable" operator. Another example is fixed, point-to-point TV ICR station leasing available subcarrier bandwidth to a third-party user, when the ICR path happens to also match the third-party's path interconnect requirements.

1D. "Frequency Re-allocation" applies where a portion of the 2.5 GHz ITFS/MMDS band is simply re-allocated to 3G, which may not allow retaining the existing use and the existing symbiotic relationship that has developed between ITFS and MMDS licensees.

## No 3G Access to 2,500-2,686 MHz Wireless Cable Band Until Experience Has Been Gained with Actual Docket 97-217 Two-Way Systems

2. In MM Docket 97-217, the Commission adopted a new method of intermixing upstream transmitters at not-known-in-advance subscriber locations. Appendix D to the July 29, 1999, Docket 97-217 Report & Order On Reconsideration further adopted a new, and far more complex, methodology that attempts to statistically analyze the aggregate interference from worst-case combinations of classes of upstream transmitters. A new propagation model, the Epstein-Peterson model, was also adopted.

3. Until practical experience has been gained with actual working digital, two-way, cellularized, wireless operations and with subscriber counts in the thousands to tens-of-thousands, and the validity of the new Appendix D methodology confirmed, the possibility of adding an additional, third, potential interferer to the 2.5-GHz ITFS/MMDS band is extremely troublesome.

4. Even assuming that two-way, cellularized, digital wireless operations prove to be a total success, and that downstream analog and digital ITFS/MMDS transmissions are able to co-exist with upstream digital signals, there is still a fundamental difference between a finite number of upstream fixed stations at known locations, and un-restricted mobile operations; *i.e.*, cell phone or PCS type applications. At least for fixed upstream transmitters at known subscriber locations, interference problems around a particular location have the potential for mitigation measures, such as substitution of a different class of upstream station with a more directive transmitting antenna, or possibly the downstream receive site experiencing interference can have its receiving antenna repositioned or upgraded, or a custom receiver with enhanced adjacent-channel rejection capability can be installed. But for completely mobile PCS-style operations such mitigation measures would not apply. In other words, interference from mobile transmitters is a fundamentally different and more serious threat than interference from fixed transmitters.

## Sample 3G-into-ITFS Interference Calculations

5. Assuming that at a future date experience with two-way, digital, cellularized wireless operations prove to be a success, attempting to share 2.5-GHz with 3G on either a frequency re-use basis, or a frequency-sharing (*i.e.*, time-sharing) basis, appears doomed to failure. First, frequency-sharing can be ruled out because there would be no control over when a co-channel 3G

mobile user might wish to make a call or send data. Second, frequency re-use can be ruled out based on straightforward engineering calculations using FCC-provided data, as follows:

6. In Table 5.1 to the November 15, 2000, Interim Report, *Spectrum Study of the 2500–2690 MHz Band*, the FCC indicates that 3G mobile transmitters would have an equivalent isotropic radiated power ("EIRP") of 100 mW (+20 dBm) and bandwidths of 1.25 MHz to 3.75 MHz for code-division multiple access ("CDMA") modulation, and 5.00 MHz for wideband CDMA ("W-CDMA"). Based on this information one can then calculate the keep-away distance necessary for a hand-held, mobile, 3G user to not cause interference to existing ITFS analog receive site.

7. Assume the maximum possible omnidirectional ITFS EIRP of 2,000 watts (+63.0 dBm) and an ITFS receive site in the middle of the station's 35-mile radius protected service area ("PSA"). Also assume the FCC 2-foot diameter reference receiving antenna with a gain of 20 dBi, and 0.5 dB of jumper cable loss between the antenna and its downconverter (losses after downconversion will be ignored). At 2.6 GHz, the free space path loss ("FSPL") for a 17.5-mile path is -129.8 dB, giving a receive carrier level at the input to the downconverter of -47.3 dBm. This means that a co-channel, interfering, 3G signal would have to be 45 dB below that RCL, or -92.3 dBm. If we assume a middle-bandwidth 3G signal, a +2.0 dB factor can be applied for the greater spectrum density ("dBm/Hertz"); that is, the 100 mW EIRP 3G transmitter will be modeled as a 158-milliwatt (+22 dBm) EIRP transmitter. Let us also assume that the 3G mobile transmitter is cross-polarized and that the maximum possible suppression of 45 dB for the FCC 2-foot diameter reference receiving antenna applies (per FCC Rule Section 74.937(a), Figure 1)[1]. Using the formula

$$RCL_{dBm} = EIRP_{dbm} - FSPL_{dB} + RX_{dBi} - Line_{dB}$$

gives a necessary FSPL of 133.8 dB; however, this requirement is then relaxed by 45 dB for the best case receiving antenna rejection, for a net FSPL requirement of 88.8 dB.

The formula for the distance necessary for a given FSPL is

$$D_{mi} = 10exp[(FSPL_{dB} - 96.6 - 20logF_{GHz})/20]$$

Thus, for a 45 dB desired-to-undesired ("D/U") signal ratio, a separation distance of 0.157 miles, or 827 feet, becomes necessary. Even if one presumes that all analog ITFS operations get

[1] That is, either the 3G mobile is at a very steep depression angle relative to the ITFS receiving antenna, or is in the back lobe of the ITFS receiving antenna.

converted to digital, and that a D/U ratio of 30 dB instead of 45 dB then becomes acceptable[2], this only reduces the keep-away distance to 0.028 miles, of 147 feet. If the 3G signal is instead parallel-polarized, as would be the case approximately half of the time, since ITFS stations routinely use cross-polarization as a technique to protect other ITFS/MMDS stations, then the threat distances increase to 1.567 miles (8,272 feet) for analog (D/U = 45 dB) and 0.279 miles (1,471 feet) for digital (D/U = 30 dB).

8. It is obviously impossible to guarantee that a 3G mobile phone user will never get within 8,272 feet of an ITFS receive site, or that the 3G user will be at a steep depression angle relative to the receiving dish or in the back lobe of the receiving dish, or that the ITFS system will have been converted to digital. Therefore, frequency re-use with 100 mW EIRP 3G mobile telephones and conventional downstream ITFS or MMDS operations in the same market will not work. Frequency re-use would not work in adjacent markets, either, because it would be virtually impossible to guarantee that mobile use in one market would not interfere with fixed use in a neighboring market, given the overlapping service areas that are typical of ITFS/MMDS operations.

## Frequency Leasing

9. The Commission has for many years encouraged frequency leasing between ITFS licensees with excess capacity and MMDS operators, and the MM Docket 97-217 decision is an outgrowth of that symbiotic relationship. For the new two-way, digital, cellularized systems now being planned, re-farming of ITFS and MMDS interleaved channels into blocks of contiguous spectrum, within which both frequency division duplex ("FDD") and time division duplex ("TDD") systems can be deployed, is the key. Further, TDD systems have the potential to further optimize spectrum efficiency, because TDD systems can dynamically allocate upstream and downstream bandwidth according to changing customer needs. Frequency leasing may lead to improved spectrum efficiency by allowing operators to assemble contiguous blocks of spectrum needed for TDD and/or FDD operations.

---

[2] The December 5, 1997, U.S.-Canada Wireless Cable MDS Agreement states, at Annex A, Item 1, the following D/U ratios for co-channel operations:
(a) analog-into-analog, 45 dB no offset, 28 dB offset
(b) analog-into-digital, 21 dB
**(c) digital-into-analog, 45 dB**
**(d) digital-into-digital, 30 dB.**

## Frequency Re-allocation

10. Some form of 3G spectrum use at 2.5 GHz may well be technically feasible under the frequency re-allocation option, but with severe impact to fixed service operations. If this approach is taken then 3G mobile use would most likely be technically feasible, so long as guard-bands are established. However, 3G base stations would have to be precluded from siting near existing ITFS fixed receive sites so as not to cause a brute-force overload ("BFO") problem.[3] But the price to be paid would be a loss of bandwidth for traditional downstream ITFS and MMDS uses, and reduced bandwidth for upstream, two-way, cellularized, transmissions. Indeed, reallocation of sufficient spectrum for 3G uses would probably not leave enough spectrum for the leased, two-way, cellularized wireless operations so recently authorized by the Commission in MM Docket 97-217. Re-allocation of 2.5-GHz band spectrum to 3G would also almost certainly be fatal to the existing system of leasing excess capacity ITFS bandwidth to MMDS operations, with the concomitant loss of upgraded ITFS facilities and the use of more spectrum-efficient digital modulation.

## Dual-Band 3G Radios

11. The NPRM appears to take as a "given" that the United States needs to adopt the same 3G spectrum as Europe; this is not necessarily the case. Dual-band, 900-MHz cellular and 1,900-MHz PCS mobile telephones have been used in the United States for several years. The additional cost of such dual-band radios is not excessive, and because they give seamless operation to the user have gained subscriber acceptance. A similar approach should be practical for dual-band 3G radios: one band for Europe, another band for the United States and possibly Canada

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[3] A BFO distance of up to 7,123 feet can be derived as follows: Use the same -28 dBm BFO-triggering receive power level at the input to an ITFS/MMDS downconverter that was documented in CTN's November 25, 1997, filing to MM Docket 97-217, and which became the basis for the 1,960-foot BFO threat distance adopted in the September 25, 1998, R&O to MM Docket 97-217, and now appearing in Section 21.909(n) of the FCC Rules. Further assume 3G base station EIRPs of 500 Watts (+57 dBm), from Table 5.1 of the Commission's November 15, 2000, Interim Report on the 2500-2690 MHz Band and Third Generation Mobile Systems. Also assume a "middle" 3G CDMA bandwidth of 3.75 MHz, giving a 10log(6.00 MHz/3.75 MHz), or +2.0 dB "dBm/Hertz" bandwidth factor; thus, the 57 dBm EIRP 3G base station will be modeled at 59 dBm EIRP (794 Watts). The worst case condition would apply when the ITFS/MMDS receiving antenna (the FCC standard 2-foot receiving antenna is assumed) is aimed towards the 3G base station and the two stations are parallel polarized ("PPOL"), in which case a separation distance of 7,123 feet or greater is needed to keep the 3G RCL at -28 dBm or lower. If the best possible off-axis rejection of 25 dB for a PPOL 2-foot reference receiving dish is assumed, the BFO threat distance drops to 401 feet. If the 3G base station is cross polarized ("XPOL") to the ITFS signal but in the main beam of the receiving antenna, the BFO threat distance becomes 712 feet. And finally if the 3G base station is both XPOL and has the best possible rejection that the 2-foot diameter reference receiving antenna can provide (*i.e.*, 45 dB), then the BFO threat distance drops to 40 feet. However, even a 40-foot keep away distance would generally imply non-collocation . Further, as discussed in Paragraph 7, approximately half the time the ITFS station and the 3G station would be PPOL.

and Mexico. In other words, conforming Europe and the United States to the identical 3G spectrum is not the only possible solution.

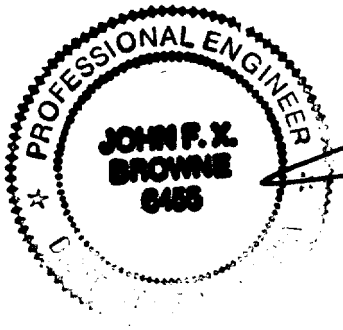
## Summary

12. Even assuming that two-way, digital, cellularized wireless operations are proven to be a success, frequency re-use and frequency sharing would appear to be fundamentally incompatible between ITFS and MMDS and 3G mobile services. Frequency re-allocation could most likely allow 3G operations in the 2.5 GHz band on an interference-free basis, but ITFS and MMDS service would then likely be left without sufficient bandwidth for viable operations.

## List of Figures

In carrying out these engineering studies, the following attached figures were prepared under our joint supervision:

1. 3G interference scenario.

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February 20, 2001

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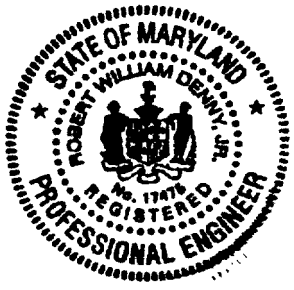


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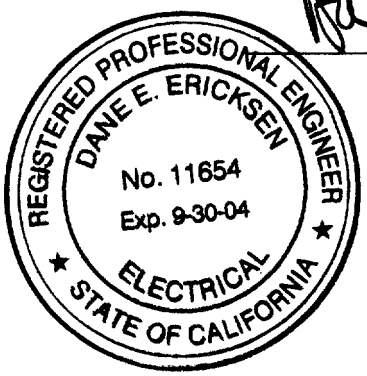


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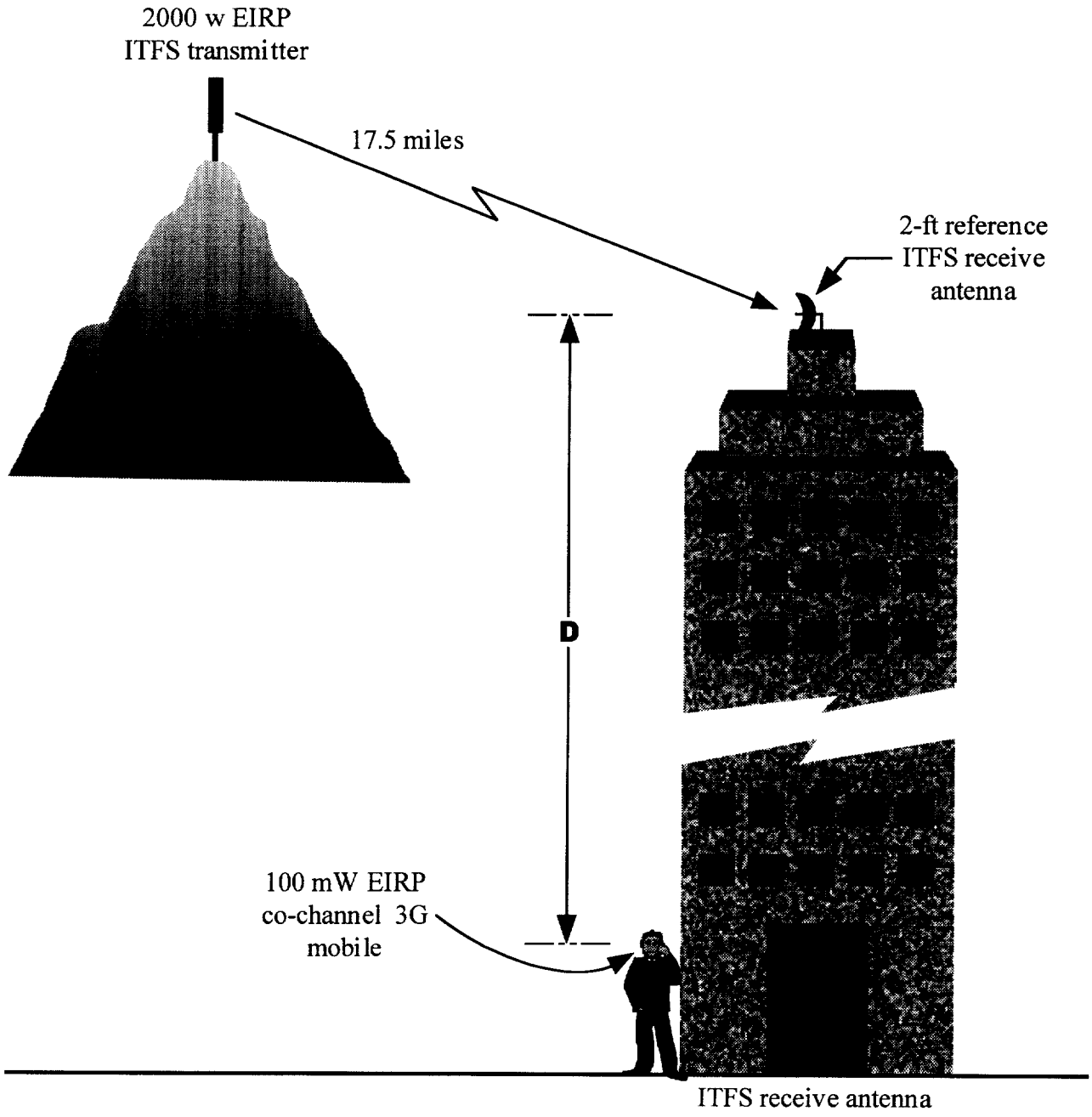
February 20, 2001

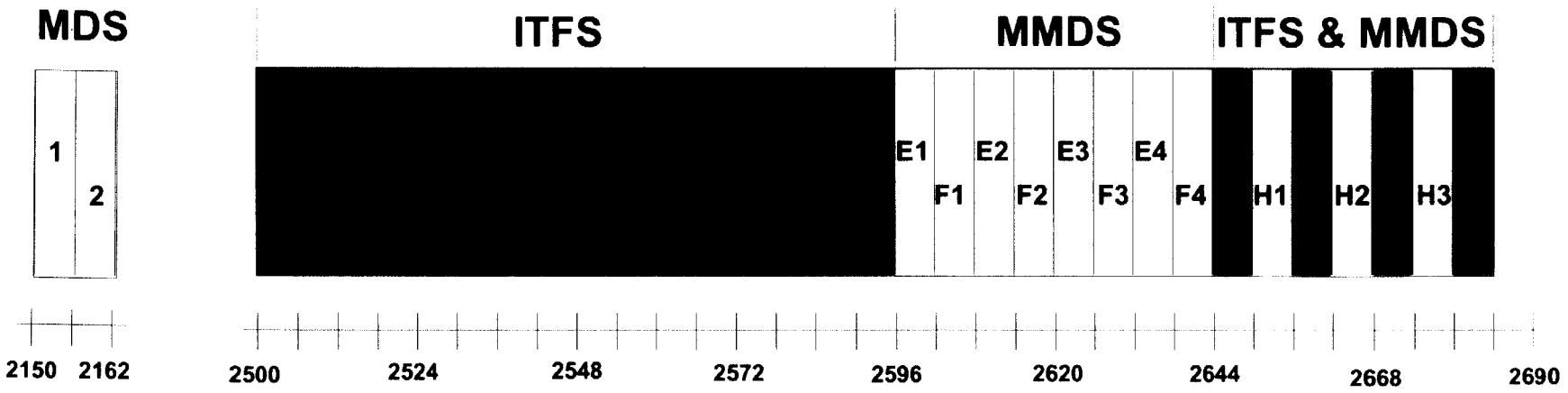
# Catholic Television Network • ET Docket 00-258 Comments

## 3-G Interference Scenario



K

# MDS
## (MDS, MMDS, ITFS)




**Congressional Federal Register References**

| | |
|---|---|
| ITFS | 47 C.F.R., Part 74 |
| MDS (Single And Multichannel) | 47 C.F.R., Part 21 |

Channel 2A: 2156-2160 MHz

2160-2162 MHZ reallocated to emerging technologies on a primary basis except for licenses operating on Channel 2, or successful applicants who filed prior to January 16, 1992. See ET Docket 92-9 FCC 93-351

**MDS (Multipoint Distribution Service)**
**MMDS (Multichannel Multipoint Distribution Service)**
**ITFS (Instructional Television Fixed Service)**

| Service | Channel Allocation | Number of Channels |
|---|---|---|
| MDS & MMDS | 1 & 2 | 2 |
| | E, F & H | 11 |

**Not Included in Auction #6**

| Service | Channel Allocation | Number of Channels |
|---|---|---|
| ITFS | A, B, C, D & F | 20 |

EXHIBIT K

FRED UPTON
6TH DISTRICT, MICHIGAN

COMMERCE COMMITTEE
CHAIRMAN, OVERSIGHT AND INVESTIGATIONS SUBCOMMITTEE
MEMBER, HEALTH AND ENVIRONMENT SUBCOMMITTEE

EDUCATION AND THE WORKFORCE COMMITTEE
EARLY CHILDHOOD, YOUTH AND FAMILIES SUBCOMMITTEE

EXHIBIT L



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CHIEF OF STAFF
JOAN MILLER-RAMOS

# Congress of the United States
## House of Representatives

January 23, 2001

President George W. Bush
The White House
1600 Pennsylvania Avenue, NW
Washington, DC 20500

Dear Mr. President,

As the new Chairman of the House Energy and Commerce Subcommittee on Telecommunications, and as a member of the House Education and the Workforce Committee, I commend the foresight of your "Enhancing Education Through Technology" proposal. I extend my enthusiastic offer to work with you to ensure that our federal investment produces reliable, real world results in our students' ability to compete in a global marketplace.

In my dual roles, I share your interest in ensuring that our children are well equipped to handle the challenges of the 21st century. This is an ambitious, but achievable, goal to ensure accountability and reliability in the use of federal funds to help close the achievement gap. In fact, I anticipate holding several hearings in my Telecommunications Subcommittee early this year, in coordination with Chairman Tauzin, on the aspects of your proposal that fall under the Subcommittee's jurisdiction. Moreover, I look forward to working with House Education and the Workforce Committee Chairman Boehner on the aspects of your proposal that fall under the Elementary and Secondary Education Act (ESEA). Together, we can move toward a better, more effective use of technology in our students' daily learning experiences and in measuring progress to ensure accountability in our communities.

In particular, I look forward to working with you on your proposals to: (1) establish an "Enhancing Education Through Technology Fund" by combining the FCC's E-Rate program and eight of the ESEA Title III education technology programs; (2) enhance funding for the Department of Education's Office of Education Research and Improvement to study ways that technology can boost student performance; (3) establish an "Education and Technology Clearinghouse;" (4) implement accountability measures for how technology improves student achievement; and (5) create additional Community Technology Centers with emphasis on "outcome-based" initiatives.

Moreover, I believe that we should focus on the issue of broadband deployment, particularly as it relates to how increased access to high-speed data services in our homes and schools could vastly improve educational opportunities.

As you may know, Governor John Engler has been in the forefront of incorporating technology in the classroom. Specifically, Governor Engler's Teacher Technology Initiative provides 90,000 Michigan teachers with computers and Internet access and assists teachers in becoming technically competent. The Michigan example is one we can examine and emulate. I hope to hold a field hearing in our state to highlight our mutual goals and Michigan's efforts along these lines.

During the 106th Congress, the House Education and the Workforce Committee took several steps toward consolidating the maze of numerous federal technology programs under the Department of Education. Most notably, the House Education and the Workforce Committee's "Tech for Success" proposal sought to enhance computer literacy amongst teachers and students while promoting state and local innovation to increase academic achievement. We must build on this framework, focusing on flexibility, accountability, and results.

I look forward to working with you and your Administration to further our common goals of improving student achievement through innovative technology programs that will deliver the best to and demand the best from our students and teachers.

Very truly yours,

Fred Upton
Member of Congress

CC: Secretary of the U.S. Department of Education Rod Paige
Michigan Governor John Engler
Speaker of the House Dennis Hastert
House Education and the Workforce Committee Chairman John Boehner
House Energy and Commerce Committee Chairman W. J. "Billy" Tauzin
Federal Communications Commission Chairman Michael Powell

Attachment A

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This page has been substituted for one of the following:

o An oversize page or document (such as a map) which was too large to be scanned into the ECFS system.

o Microfilm, microform, certain photographs or videotape.

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