numerous dedicated leased lines tie together switching and routing resources, private networks and individual computer nodes. The sole capability of the Internet fabric is to route data packets. No entity owns even a sizable fraction of the fabric of the Internet, and most forward packets from any source. There is no means currently to charge by the packet or on the basis of the distance the packet travels, nor is there an ability in the Internet to establish end-to-end circuits. Packet delivery is on a best effort basis. There is no expectation of minimal level of service: performance varies unpredictably due to traffic parameters which are beyond the ability of any Internet participant to control.

Thus in the Internet, voice communication capability is only one possible use of a general purpose data communications infastructure. Furthermore, it is a user-provisioned capability and is clearly not a service provided by a common carrier or other central entity capable of regulation in the sense sought by ACTA.

The Future Internet:

The National Academy of Sciences describes the current period as "the Unpredictable Certainty". In its publication of the same name, they write that...

> "The national information infrastructure (NII) is the collection of all public and private information services -- both facilities- and content-based -- operating as a complex, dynamic system. It exists today but is and always will be in a state of flux." p. 4

The FNC believes that regulatory intervention in the Internet's evolution could have significant detrimental effects upon the Internet achieving its potential as the backbone of the National Information Infrastructure / Global Information Infrastructure (NII/GII). Regulation in the early stages of promising new communications technologies has historically resulted in delaying their development and deployment.

As described above, voice traffic is one of a growing number of services available over the Internet and is indistinguishable from many related services, including Distance Learning applications, video conferencing, and multicast transmissions. These applications are considered by industry, academia, the education community, and others as fundamental components of their future operating environments.

Furthermore, the Internet of today and tomorrow is global in scope and use. Actions taken in the United States to regulate the use of one type of service would have little effect upon its use in the rest of the world. Furthermore, such actions would, in effect, lead to an erosion in the United State's leadership in this important technology.

The FNC therefore urges the FCC to deny the ACTA petition, and instead, seek out mechanisms for promoting the development of these promising emerging technologies.

Regards,

George Strawn
Co-Chair
Federal Networking Council

**CC:** FCCMAIL.SMTP("tmonk@darpa.mil")

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MAY - 7 1996

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

**From:** Gene Gaines <ggaines@generation.net>
**To:** A16.A16(rm8775)
**Date:** 5/7/96 4:14pm
**Subject:** Rulemaking No. 8775, ACTA Petition -- Informal Comments

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Re: Rulemaking No. 8775, ACTA Petition

Personal comment regarding the Petition for Declaratory Ruling, for Special Relief, and for Institution of Rulemaking Proceedings filed by the trade group "America's Carriers Telecommunication Association" (ACTA).

THE PETITION IS DEFECTIVE AND BROUGHT FORWARD ON GROUNDS WHICH ARE UNTRUE. IT SHOULD BE DENIED.

Analysis of the petition reveals that it is based solely on the ACTA assertion that long distance service is being given away, see two references below, taken from the ACTA filing:

---

Excerpts from the ACTA petition as filed with the FCC:

SUMMARY

"ACTA submits that it is not in the public interest to permit long distance service to be given away ..."

CONCLUSION

"Permitting long distance service to be given away is not in the public interest. ..."

---

There is no other basis for action claimed in the petition.

The use of the Internet technology described in the ACTA petition is not free.

The user must employ computers, data modems, sound cards, micro- phones, loudspeakers and computer software which are not free, costing at least $5,000 for the station equipment at the two ends, plus local telephone lines used for data access, plus Internet usage fees.

Such use is not free.

THEREFORE, THE PETITION IS DEFECTIVE AND BROUGHT FORWARD ON GROUNDS WHICH ARE NOT BASED IN FACT. IT SHOULD BE DENIED.

While there are many interesting arguments touched on in the ACTA petition concerning issues of telephony, the FCC and regulation, for the Federal Communications Commission to take up those arguments would be gratuitous and based on a petition not based on fact.

The Federal Communications Commission is acting today with a new vigor and sense of direction which flow from imperatives handed down by Congress and by the President. At this time, to even give the appearance of using the ACTA complaint as an excuse for declaring a "status quo" or to interrupt the U.S. leadership in the worldwide communications revolution which popularly called "Internet" would have consequences quickly reaching that of a disaster.

The petition is defective and should be dismissed without delay.

The filing of the petition has received much notice and comment, and has resulted in conferences, such as is taking place in New
York City this week, where industry and users are beginning to discuss the issues of this new technology and the dislocations it will surely bring to providers and to users. This is healthy.

Should ACTA wish to refile based on economic evidence of their loss of revenue to a technology or facilities, the use of which is artificially barred to ACTA members, they are free to do so.

ADDITIONAL GENERAL COMMENT

I will make the additional comment that that the class of Internet users cited in the complaint are using data access and data carriage only. Many users employ full-time leased data line facilities for Internet access, at one end or both ends of such a connection. Corporate long distance users employ private line networks, specialized low-cost switched or shared facilities, and local access through dial-in and PBX. There is clear precedent here that such uses are permitted for data AND voice carriage, employing circuit-switching or data packet switching technology. In the case of Internet applications such as those cited by ACTA, the users are acting as their own switched-service providers, similar to the case of corporate and government private network users. Are small users to be denied facilities which are used by large corporations?

For the FCC to consider the ACTA petition in any fashion would be a stunning redirection of the regulatory process. It would spur the development of new technologies in other countries, and seriously harm such development in the United States.

I urge the commissioners not to start a process which will do harm

Respectfully,

Gene Gaines
U.S. citizen, submitted from Canada

Email: ggaines@generation.net
Voice: 514-768-6719
201 Corot, Suite 803
Nuns Island, Quebec, H3E 1C4
Canada

**CC:** FCCMAIL.SMTP("sandy@von.org")

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MAY - 7 1996

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

**From:** Heather Boyles <heather@farnet.org>
**To:** A16.A16(rm8775)
**Date:** 5/7/96 8:50am
**Subject:** RM No. 8775

The Federation of American Research Networks
1112 16th Street, NW
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Washington, DC 20036
(202) 331-5342

May 6, 1996

DOCKET FILE COPY ORIGINAL

Office of the Secretary
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1919 M Street, NW
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Washington, DC 20554

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"Modern two-way, interactive capabilities will not only enable users at schools, libraries and rural health care facilities to access information, but also give students the ability to participate in educational activities at other schools, including universites; allow students, teachers, librarians and rual health care providers to consult with colleagues or experts at other institutions..." (footnote 3)

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While this is not true, the opposite is not the case either. The highly competitive Internet access market is unlikely to tolerate "unreasonable" or "unjust" charges. Furthermore, consumers are not being harmed by the opportunity to explore an emerging technology, especially if it offers a price-competitive alternative to long-distance telephony. Finally, as described above, it is in the public interest to allow our nation's school children to communicate in real-time with scientists, business people, government leaders and other educators in ways that school budgets have never been able to allow to take place before.

The integration of voice, data and video technologies is crucial to the future of education and research in the u.s. The ACTA petition would have far-reaching implications for the future of education in this country.
The integration of voice, data and video is expected to be one of the most important developments for higher education and research institutions.

FARNET members are, along with others in the higher education community, developing plans to accelerate and continue this integration of media, in order to 1) cut the ever-expanding costs of maintaining separate campus infrastructures for telephony and data communications, and 2) to realize the potential of distance learning and other collaborative applications needed to expand the boundaries of traditional higher education institutions. (footnote 5)

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Finally, it is not in the public interest to preserve a small niche market for a very few resellers to the detriment of a technology that brings the promise of greater competition, lower prices and greater technological innovation to the

whole of the telecommunications industry. The Commission should deny ACTA's petition. The Commission should continue to be foresighted in its view of the future of telecommunications, especially for the educational institutions in this country.

Thank you for your consideration.

Sincerely,

Jim Williams
Executive Director

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email: heather@farnet.org
web: http://www.farnet.org

**From:** Heather Boyles <heather@farnet.org>
**To:** A16.A16(rm8775)
**Date:** 5/7/96 8:51am
**Subject:** RM No. 8775

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May 6, 1996

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1919 M Street, NW
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Washington, DC 20554

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**To:** A16.A16(rm8775)
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The Federation of American Research Networks
1112 16th Street, NW
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(202) 331-5342

DOCKET FILE COPY ORIGINAL

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The Congress set out principles in the Telecommunications Act of 1996 calling for, "a pro-competitive, de-regulatory national policy framework designed to accelerate rapidly private deployment of advanced telecommunications and information technologies ot all Americans."
(footnote 1)

Furthermore, the Commission has, through its current rulemaking on
Universal Service (footnote 2) pointed out that,

"Modern two-way, interactive capabilities will not only enable users at schools, libraries and rural health care facilities to access information, but also give students the ability to participate in educational activities at other schools, including universites; allow students, teachers, librarians and rual health care providers to consult with colleagues or experts at other institutions..." (footnote 3)

Finally, Title IV of the Telecommunications Act of 1996 requires the
Commission to forbear from applying any regulation if 1) enforcement is not necessary to ensure that charges are just and reasonable or not unjustly or unreasonably discriminatory, 2) enforcement is not necessary to protect consumers, and 3) forbearance from such regulation is in the public interest. (footnote 4)

FARNET feels that denial of the ACTA petition's request for the Commission to initiate a rulemaking with the aim of regulating "Internet Phone" type applications is justified in keeping with the above conditions. ACTA asserts that real-time voice over the Internet is "free" to the consumer.
While this is not true, the opposite is not the case either. The highly competitive Internet access market is unlikely to tolerate "unreasonable" or "unjust" charges. Furthermore, consumers are not being harmed by the opportunity to explore an emerging technology, especially if it offers a price-competitive alternative to long-distance telephony. Finally, as described above, it is in the public interest to allow our nation's school children to communicate in real-time with scientists, business people, government leaders and other educators in ways that school budgets have never been able to allow to take place before.

The integration of voice, data and video technologies is crucial to the future of education and research in the u.s. The ACTA petition would have far-reaching implications for the future of education in this country.
The integration of voice, data and video is expected to be one of the most important developments for higher education and research institutions.

FARNET members are, along with others in the higher education community, developing plans to accelerate and continue this integration of media, in order to 1) cut the ever-expanding costs of maintaining separate campus infrastructures for telephony and data communications, and 2) to realize the potential of distance learning and other collaborative applications needed to expand the boundaries of traditional higher education institutions. (footnote 5)

Lastly, the specific arguments of the ACTA petition are ill-formed at best.
The assertion by petitioners that the software developers it names as defendants should be considered under Commission rules as
"telecommunications carriers" for the purpose of regulation is quite a stretch of the relevant definition. Secondly, defendants are developers of software for customer premises equipment, which has been specifically deregulated by the Commission in previous proceedings.

Petitioners also assert that the Internet's infrastructure is somehow being damaged by the use of such software and specifically that it is
"detrimental to the health of the nation's telecommunications industry and the maintenance of the nation's telecommunications infrastructure."
Primarily, they argue, telecommunications infrastructure will fail to be properly maintained, because defendants are giving away the interexchange voice service for "free or next to free." This is factually incorrect. At present, the end user may find, in a highly competitive market, that flat rate monthly charges dominate the Internet access business. The Internet service providers themselves pay owners of the underlying infrastructure based on average bandwidth utilization.

Finally, it is not in the public interest to preserve a small niche market for a very few resellers to the detriment of a technology that brings the promise of greater competition, lower prices and greater technological innovation to the

whole of the telecommunications industry. The Commission should deny ACTA's petition. The Commission should continue to be foresighted in its view of the future of telecommunications, especially for the educational institutions in this country.

Thank you for your consideration.

Sincerely,

Jim Williams
Executive Director

Footnotes:

1 Pub. L. No. 104-104, 110 Stat. 56 (1996).
2 CC Docket No. 96-45, FCC 96-93, adopted March 8, 1996.
3 Id. para. 2, Section IV. A.
4 1996 Act, (to be codified at 47 USC 160 (a))
5 FARNET can provide the Commission with its publication (co-sponsored with EDUCOM, et al.), Higher Education and the NII: From Vision to
Reality, the text of the Monterey Conference Proceedings of September 1995.
The proceedings document the needs of higher education, especially in the integration of voice, video and data communications and the plans to make that integration happen

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