From: David Stoddard <dgs@us.net>
To: A16.A16(96-102)
Date: 6/15/96 6:34pm
Subject: Comment on NII/SUPERNET 15km no-licence band

Dear Sirs:

I represent US Net, a regional Internet service provider with a network that includes Baltimore, DC, Richmond, and the Dominican Republic. The NII/SUPERNET proposal for a frequency band to support a 15km no-license band for spread spectrum is critical to support the future of the Internet.

To demonstrate why this no-license band is so important, I will describe two real situations that we have encountered recently that have impeaded our ability to provide service to areas that do not provide service to currently.

Case 1 - Connecting our network in Annapolis, MD to the Maryland Eastern Shore. In order to connect Annapolis, MD, to the Eastern Shore, we need to obtain a circuit that crosses the Chesapeak Bay. Annapolis is in the Bell Atlantic Baltimore LATA, while Kent Island (4 miles away) is in the Bell Atlantic Eastern Shore LATA. Because the circuit goes over a LATA boundry, we are not allowed to buy the circuit directly from Bell Atlantic -- we have to use an IXC, such as Cables and Wireless or Sprint (note that the IXC can purchase this circuit directly from Bell Atlantic, but we can not).

To get to Kent Island, the IXC's require us to backhaul our circuit to Baltimore, then travel from Baltimore to Salisbury, MD (100 miles away), then from Salisbury back to Kent Island. The cost of this circuit is approximately $3,000. If we were able to simply cross over the Bay 4 miles, this T1 circuit would be approximately $400. If we could use the 15km no-license spectrum to cross the Chesapeak Bay, we could provide Internet service to a community that does not currently have service. Under the current system, we can not afford to pay $3,000 a month to connect Kent Island to our Annapolis facility -- there are not enough customers on Kent Island to cover a $3,000 monthly circuit cost.

Case 2 - Connecting our Richmond, VA, network to Staunton, VA, to provide Internet access to Mary Baldwin College. This is a similar situation to the Annapolis/Eastern Shore problem above. In this case, we wanted to use Frame Relay to implement a connection on the western edge of the Richmond LATA, then use a bridge circuit to connect the Richmond LATA to the Charlottesville LATA, and then finally use Frame Relay to connect to Mary Baldwin College. Unfortunately, all of the IXC's we talked to would backhaul our circuit to Richmond, then cross to Charlottesville -- the cost is beyond our ability to provide service and still earn a living. The result is that Mary Baldwin College will not be able to connect to our network because the cost is too high.

Another argument for a no-license band relates to the servicing of an operational circuit that crosses a LATA -- another true story. We have a line that crosses from Laurel, MD, to Baltimore, MD, at a significant cost (due to backhauling and other IXC requirements). On May 1, we started to detect sporadic line failures in the T1 circuit between Laurel and Baltimore. Although the actual line is

a Bell Atlantic line, we can not call BA for service because it is ordered by the IXC (Cables and Wireless).

Before the IXC would call BA to service the line, they required us to demonstrate that the line really was bad -- for some reason the IXC did not see the errors while we could. Once BA was called, they were able to determine within a matter of minutes that the line was defective. In the end, it took seven days and several calls to the president of Cables and Wireless and the BA Executive office to get the circuit fixed. If we would have had control over our own circuit, we would have been able to get our line fixed immediately. No-license spread spectrum will allow us to achieve this goal.

Bell Atlantic and the IXC's do not have our interests at heart. LATA boundries are an example of a system that works against us and in favor of BA and the IXC's. With Bell Atlantic and the IXC's now entering the Internet business, our ability to compete against these heavily capitalized giants is getting harder and harder. The allocation of a no-license spread spectrum frequency would provide a tool to the Internet service providers to compete against the IXC's. Please support the allocation of a no-licence 5 GHz band for 15km communication links. Please feel free to contact me if you have any questions.

Sincerely,

David G. Stoddard, CEO
US Net Incorporated
3316 Kilkenny Street
Silver Spring, MD 20904

dgs@us.net - Email
(301) 572-5926 - Voice
(301) 572-5201 - FAX

From: David Dyk <stevend@wolfe.net>
To: A16.A16(96-102)
Date: 6/15/96 10:23pm
Subject: Spectrum Radio

Hi. I operate a small ISP in Washington state. I currently have to pay > $2000/month for a simple 1.54mb/s dedicated telephone circuit. I would like to state that I, for one, would love to have a digital radio which would cost little to operate. I currently am a licensed amateur radio enthusiast, and love to use radios. Let us not keep the wonder of radios to ourselves, but instead share it with others.

-David Dyk
-Connecting Point / Yakima

From: System Administrator <root@dns.midcoast.com>
To: A16.A16(96-102)
Date: 6/16/96 3:04pm
Subject: NIIBand comment

Dear FCC;

I am an internet service provider who views no license/cost wireless as a very important technology for our business and our communities, and the thousands of other local ISP's would surely agree. Auctioning the NII/SUPERNET band to a large well financed company would do a terrible disservice to the thousands of communities and _small_businesses_ that could make better use of it.

Thank You;

Jason Philbrook
Midcoast Internet Solutions jp@midcoast.com

From: Arthur E. Zysk <art@nji.com>
To: A16.A16(96-102)
Date: 6/16/96 9:46pm
Subject: need solution for ISp's

I need a solution where I can connect our localpoint of presence (POP) sites across the state of New Jersey.

Simply put, we must implement local call sites in every region of New Jersey.

A 0-cost wireless solution with low cost radios giving T-1 access speeds would allow our firm to compete with large telephone companies who already own T-1 links around the state,

We aim to offer internet services to every individual in the state of New Jersey for the lowest possible cost. We believe we can do this more efficiently than any other large telephone or cable provider.

Arthur Zysk
President
New Jersey Internet
2713 Route 23 South
Newfoundland, NJ 07435
201-208-8800 art@nji.com

From: <nelson@crynwr.com>
To: A16.A16(96-102)
Date: 6/15/96 1:39pm
Subject: Wireless local loop

Hello. My name is Russell Nelson. I run a small software consultancy in Potsdam, NY. We have a state university and a K-12 school in town.
The K-12 school put in a campuswide (three buildings) Ethernet last summer. They would like to be connected to the Internet through the state university, and the state university is willing. They could get a connection through a local T-1, but that would cost $20,000. They could get a connection by running their own fiber, but Digital has estimated the cost of that at $75,000 (one-time cost). We're going to end up connecting them using a wireless Ethernet bridge, but even that costs $7,000. Other schools in the area would like to do the same thing, but the equipment costs are prohibitive for the longer range needed. If you were to approve this docket, we could do the same for other local schools. Please approve it.

-russ <nelson@crynwr.com> http://www.crynwr.com/~nelson
Crynwr Software sells packet driver support | PGP ok
521 Pleasant Valley Rd. | +1 315 268 1925 voice | It's no mistake to err on
Potsdam, NY 13676 | +1 315 268 9201 FAX | the side of freedom.

From: Mark Allyn 206-860-9454 <allyn@allyn.com>
To: A16.A16(96-102)
Date: 6/15/96 12:37pm
Subject: NIIBand

Hello:

I am involved in community networking where we have schools, libraries and community groups who need affordable connectivity.

I feel that the new low power spread spectrum technologies is a good solution for public community networking. It provides the most efficient use of radio spectrum. The technology and equipment is allready available. One does not need to have a highly technical education or credentials to install and operate this equipment.

I would like to see more radio bandwidth made available for unlicenced low power spread spectrum use by communities.

Mark Allyn allyn@allyn.com

1161 21st Ave E.
Seattle, Wa. 98112
(206) 860-9454

From: Rich Murphey <rich@rich.isdn.bcm.tmc.edu>
To: A16.A16(96-102)
Date: 6/15/96 11:57am
Subject: Comment on 96-102

Dear Sirs,

I am an Instructor and Research Associate at the University of Texas Medial Branch in Galveston, Texas. I do basic science research in Physiology and teach a graduate level neuroscience course.

Internet access has become an indispensable tool of the trade for collaborative research for people like me. The NSF and NIH are funding fewer grants for individuals in favor of collaborative research between multiple principal investigators and a growing number of these are separated by distance. For this reason academic research in the US is becoming increasingly dependent on internet access for sharing data and on email as a way of carrying on daily discussions between collaborators.

It is my understanding that NIH grants prohibit specific kinds of telecommunications costs, such as phone lines, presumably because they are intended to be provided by state and federal funding at the the university level. So as it stands, some researchers are unable to make any direct payment for the telecommunications costs of internet access. However, costs of equipment such as radios and digital modems are not restricted on such grants. NII/SUPERNet devices could provide connectivity to small satellite clinics, off-campus laboratories and remote classrooms that are currently unable to justify university funding for telecommunications costs.

Given the well-known success of the internet and email at bringing together students and educators, I believe that adoption of proposal no. 96-102 for Unlicensed NII/SUPERNet Operations in the 5 GHz Frequency Range would be of great value and would have significant positive impact for higher education in the US.

Carey Richard Murphey, PhD 409-772-3399
Dept. of Physiology & Biophysics Fax 409-772-3381
Univ. of Texas Medical Branch rich@lamprey.utmb.edu
Galveston, TX 77555-0641

From: Joe Greco <jgreco@solaria.sol.net>
To: A16.A16(96-102)
Date: 6/15/96 9:31am
Subject: Comment on Wireless Freq.'s

Hello,

I represent a small ISP in Wisconsin. Having read about the "NIIBand" issue currently under consideration, I felt compelled to comment that this sort of technology is central to the development of broader, more flexible information access technologies.

I've heard and read the arguments about educational use of this sort of technology. That is right on! We are across the street from the largest high school in West Allis, yet without some form of wireless, it would be costly to run bandwidth across the street. Even with some form of "wireless Ethernet" that is already commercially available, there is no easy way to get the other schools - mostly within a five mile radius - to share in that bandwidth. You've heard this argument, it is compelling, but it is just one example.

This proposal is a start in the direction of "mobile" data transportation. I need to be able to go on a customer's site, or to a demo site, etc., and have high speed Internet access. The costs to have a regional telco drop a T1 line for a month is prohibitive. The costs and availability of ISDN, coupled with the relatively low bandwidth and switch configuration nightmares, make that an unlikely alternative. It would be incredibly economical to be able to set up a pair of high speed radios!

I do not see this technology as a replacement for conventional leased T1 lines, etc., but I do see it as an alternative. It could complement conventional T1's in a very nice way, addressing many of the major failings (portability, short term practicality, etc) and making new things possible that were not possible before, at ANY cost.

Thank you,

... Joe

Joe Greco - Systems Administrator
Solaria Public Access UNIX - Milwaukee, WI
jgreco@ns.sol.net
414/342-4847

From: James Evans <jrevans@amfrontier.net>
To: A16.A16(96-102)
Date: 6/16/96 11:33am
Subject: Comment regarding nii/supernet

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of)
)
Amendment of the Commission's Rules to) ET Docket No. 96-102
Provide for Unlicensed NII/SUPERNet) RM-8648
Operations in the 5 GHz Frequency Range) RM-8653
)

COMMENTS OF AMERICAN FRONTIER

The current proposal to limit use of the newly allocated spectrum to short range applications would make a wonderful new technology unavailable to the public. As an Internet Service Provider, our local loop charges (through the telephone companies) can exceed $60,000 per year. Current technology would allow us to totally dispense with these charges by using the 5GHz frequency range to transmit between our nearby locations. This savings would allow us to then lower our cost to the consumer, thereby allowing more people in our area to benefit from the wealth of knowledge found on the internet. The Johnston County school district of North Carolina has contacted us with interest in putting all of their schools on the internet. Current estimates of the local loop charges for these schools are approximately $180,000 per year. The NII/SUPERNet would be an ideal solution, allowing this school system's students to have the benefits of the internet without having to cut back on funds from other departments. I'm certain that there are many other school districts throughout the US that will find themselves in the same situation.

James Evans

From: Mike Renfro <mwr@midtenn.net>
To: A16.A16(96-102)
Date: 6/17/96 1:37am
Subject: Informal comment for NII/SUPERnet

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of)
)
Amendment of the Commission's Rules to) ET Docket No. 96-102
Provide for Unlicensed NII/SUPERnet) RM-8648
Operations in teh 5 GHz Frequency Range) RM-8653
)

COMMENTS OF MICHAEL W. RENFRO, SYSTEMS ADMINISTRATOR, IMAGES ON_THE NET

As the systems and network administrator for a small Internet Service Provider in middle Tennessee, I'm very interested in the potential of wireless communication for our business.

We currently provide Internet access for a 3-county area between Nashville and Knoxville, and there is substantial competition for this market. Therefore, the cost of providing adequate bandwidth to our customers without unnecessarily raising their rates is foremost in our minds.

Our local telephone company provides very few services suitable for wide-area networking (assume that we require a minimum of 15-20 wide-area customers to be online at one time):

1) Foreign exchange telephone lines @ $175/month. Each line can provide service to one customer at a time.

   Total cost per month to service 15-20 customers: $2625 - $3500.

2) Single 56kbps leased line @ $500/month. Each of these leased lines would also require local telephone lines to be installed at the remote location at a rate of $40/month/line. The bandwidth provided by each leased line can only service 2-4 customers at a time, so we'd have to purchase 4-10 leased lines to adequately serve our customers.

   Total cost per month to service 15-20 customers: $2600 - $5800.

3) Single T1 leased line @ $2600/month. As with the 56kbps line, local telephone lines must be installed at a rate of $40/month/line. Please note that the T1 line would only run approximately 40 miles, making the T1 cost well over FOUR TIMES THE NATIONAL AVERAGE, and approximately TEN TIMES the rate charged by a nearby telephone company for a T1 line run over 100 miles.

   Total cost per month to service 15-20 customers: $3200 - $3400.

We have no other options from our telephone company: no Frame-Relay, no fractional T1, no ATM, no wide-area ISDN. We are working with them to open up other options, but progress is extremely slow. Simply put, long-range wireless communication between our main facilities is our best bet for the most economical method of providing adequate service to our customers.

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Mike Renfro | Linux Lama and Perl | Geek Code Version: 3.1 -- GE/CM
Images ON_the net | Diver for midtenn.net | s:- C++$ UL+++$ P+ L++ E+(----)
615-526-2018 | http://www.midtenn.net/ | W+(--) N++ w(---) V(--) Y+ 5++ X+