

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC. 20554**

In the Matter of)
)
Petition for Rulemaking of the Wireless Ethernet) **RM-10371**
Compatibility Alliance To Permit Unlicensed National)
Information Infrastructure Devices to Operate in)
the 5.470 – 5.725 GHz Band)

To: The Commission

**COMMENTS of Nickolaus E. Leggett
N3NL Amateur Radio Operator**

The following are comments from Nickolaus E. Leggett, an amateur radio operator, inventor, and a certified electronics technician.

Dark Fiber and Radio Local Area Networks

The petitioners state that they expect an “inevitable explosion of demand for broadband mobile wireless data systems”. In the past, this type of claim was made by the builders of fiber optic networks. These claims lead to a substantial over-investment in fiber optic networks. Much of the fiber optic capacity is unused, “dark”, contributing to the business difficulties of the telecommunications industry.

Such a situation could develop in wireless due to the numerous Part 15 wireless systems that have been approved and are being approved by the Federal Communications Commission. It is undesirable to have such a situation develop in the wireless industry.

The Commission can avoid this problem by conducting its own engineering studies of the communications capacity of the already approved Part 15 wireless services and the proposed Part 15 services that are likely to be approved. Taking this capacity data, the Commission should then conduct its own economic studies of the likely demand for wireless

services including broadband wireless services. This set of studies would provide a fact-based view of the total world of wireless Part 15 services.

Using this information, the Commission would then be able to make reasonable decisions on this and similar petitions for additional Part 15 capacity.

Mobile Networks and Safety

The petitioners identify mobile uses of their Part 15 service. This can have a negative impact on motor vehicle operation and safety. Already safety problems with drivers using conventional cellular telephones have been observed. Having more broadband services available to automobile drivers can add to this problem of driver distraction. The Commission should include the National Highway Traffic Safety Administration (NHTSA) in studying this possible impact of mobile radio local area networks (RLANs).

Freenets on 5 GHz

The petitioners state that their proposal will encourage the development of “freenets” on 5 GHz. These freenets are provided by individuals on a no-cost basis to their communities. While I am a strong supporter of community-based media (and have petitioned the Commission on this subject), there is a problem with many of the freenets. Internet service providers (ISPs) have complained that freenets are being used for theft of service by linking users to the Internet while bypassing the ISPs. The Commission must address this issue before it proceeds to encourage freenets by 5 GHz allocation decisions.

Frequency Conquest via Part 15 Rules

The proliferation of Part 15 devices can lead to a situation of “frequency conquest” where the Part 15 devices flood the spectrum and eventually displace the licensed users. This creates a political environment where the numerous users of the new Part 15 devices pressure

the powers-that-be to get rid of the licensed users who have become a public nuisance. This is the radio equivalent of the situation where developers build houses around an existing small airport and then the new residents push for the closure of the airport as a public nuisance. This is not a rational way to conduct spectrum allocation decisions.

Global Harmonization

Global harmonization of standards is not a sufficient reason for U.S. spectrum allocation decisions. Other nations have different communications situations and needs. The U.S. should not simply follow foreign decisions without deciding if the foreign model applies in the American context.

Also, since the international standards bodies consist primarily of industry representatives, other interests in society are not represented in these standards bodies.

Convenience vs. Necessity

Much of the appeal of wireless (especially indoor wireless) is the convenience of avoiding the use of cables. Should the market forces driven by convenience be allowed to displace other services which have a direct and important need to use radio signals?

Listen-Before-Talk Protocol

The use of a listen-before-talk protocol will result in weak amateur radio signals being ignored and overridden by the Part 15 devices. Since most of the amateur radio communications on the 5 GHz band (5.650-5.925 GHz) are weak signal communications, including moonbounce communications, amateur experimentation on this band will be greatly inhibited. Certainly, Part 15 devices operating 1-Watt transmitters into high-gain antennas will interfere with amateur radio weak signal communication.

Recommended Action

The FCC should rigorously examine the full range of Part 15 activity and its consequences before proceeding with this petition.

Respectfully submitted,

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Copies of these comments have been sent to the petitioners by first class USPS mail:

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