

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

In the Matter of Revision of Part 15 of the Commission's  
Rules Regarding Ultra-Wideband Transmission Systems

ET Docket No. 98-153  
FCC 98-208

COMMENTS OF LOW TECH DESIGNS, INC.

Low Tech Designs, Inc. (LTD), thru its President, respectfully submits the following comments in the above captioned docket.

LTD believes that this inquiry is one of the most important proceedings the FCC has initiated. The potential uses of Ultra-Wideband Transmission systems and devices (UWB) is limited only by the imagination and creativity of the electronics industry. After the recent auctioning and giveaway of broadcast spectrum, it is refreshing to see the FCC explore public access to wideband spectrum capabilities on an unlicensed basis.

The last mile connection to converged broadband digital networks continues to be the greatest bottleneck for end users of telecommunications services. UWB systems and devices could provide end users with the ability to buy bandwidth, just as end users have bought modems, TVs, VCRs, personal computers, CB radios and other electronic devices. These devices, owned by the users and subjected to Moores Law and widespread competition, have continually increased in their capabilities while coming down in price.

This same type of cost/benefit curve in the provisioning of last mile digital connections to homes and businesses is needed in order for the promises of a converged digital age to take hold.

LTD believes that unlicensed and deregulated UWB systems and devices, if allowed by the Commission, would provide the basis for high speed digital local area networks between homes and businesses sharing a common and closely aligned geographic proximity. This local area network would form the basis for connection to existing and future providers of telecommunications and information services.

Ideally, this local area network would be created on a block-by-block, or neighborhood-by-neighborhood basis, with fiber to the curb, xDSL, broadband wireless or satellite technologies providing the connection to the outside world. Multiple potential providers of outside world connections at the local network gateway or headend would create a competitive environment similar to that of equal access for telco central offices.

This type of network approach would allow for the ad hoc creation of high speed networks, with the end users investing substantially in the last mile solutions.

The UWB technology that would make these types of last mile networks possible could be inexpensively incorporated into mass produced HDTV

and direct satellite transceivers, personal computers, residential gateways or open cable boxes. These devices could be purchased by the consumer and would have built-in or add-in transmitter/reciever units that would provide for this type connectivity.

From a regulatory standpoint, these networks could be viewed as an extension of the deregulated inside wire doctrine applied to telephone and cable tv wiring, or as an extension of the U-NII or Citizens Band regulations.

In urban, closely concentrated environments, the technology would ideally create small cells of users transmitting at very low power levels. In rural areas, power levels would be allowed to rise to meet the demands of the more dispersed interconnected cell of users.

From a frequency perspective, it would be necessary for these devices to have the ability to operate in those portions of the spectrum providing the best ability to transmit thru tree clutter and walls. No line of sight requirements should be implied in the frequencies allowed for use, as in existing U-NII frequencies. Point to point and point to multipoint operation should be allowed.

If the FCC frees the use of the spectrum to meet the realities of current and future digital signal processing capabilities, the systems to utilize the spectrum will be built and the consumers will come.

Low Tech Designs, Inc. encourages the Commission to allow the creativity and wisdom of the market to find the highest use available for the public spectrum. Deregulation of this critical last mile infrastructure capability will usher in the promise of a digitally interconnected world where the consumer participates in the investment and building of this currently limiting bandwidth bottleneck.

Respectfully submitted,

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