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September 6, 2000

Ms. Magalie Roman Salas
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

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FCC MAIL ROOM

RE: Ultra-Wideband
ET Docket 98-153

Dear Ms. Salas:

I am writing in regards to the FCC's Notice of Proposed Rule making on ultra-wideband radio. I am compelled to contact you by what I perceive as the enormous potential benefits of this technology. I, and others in my profession, feel this technology may have broad reaching consequences in the biologic sciences in the future.

I am a practicing radiation oncologist with a large multispecialty oncology group in North Alabama: Comprehensive Cancer Institute. The nature of my specialty is the application of various forms of electromagnetic radiation for both the visualization and treatment of cancer. Over the past two decades, I have witnessed a virtual transformation in the way we "view" patients and their subsequent care. There has been an examination of each segment of the electromagnetic spectrum, and what we have found is that virtually every new way of manipulating EMF yields therapeutic and diagnostic tools that have revolutionized health care. Let me give you some practical examples starting with long wave frequencies going toward high frequencies:

1. Ultrasound
   A. Therapeutic: lithotripsy for kidney stones; deep muscle heating in sports medicine
   B. Diagnostic: diagnostic ultrasounds for gynecology, cardiology, etc.
2. Thermal
   A. Therapeutic: hyperthermia used in the treatment of cancer; deep muscle heating used in sports medicine; infrared lamps used in nurseries to warm infants and maintain body temperature
   B. Diagnostic: thermal mammography; thermal imagery of blood flow
3. X-ray
   A. Therapeutic: radiation oncology
   B. Diagnostic: diagnostic x-rays in its many forms
4. New Modalities – MRI, PET, etc.

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The point I am hoping to make is that each new technology adds to our ability to accurately diagnose and treat people and is vital for the progress of medicine. Pulsed ultra-wideband radio has an enormous potential as a small low powered radar which may visualize internal organs much like ultrasound but with much greater detail. This could allow us to see patient problems quickly, efficiently, and render appropriate care. The therapeutic applications are yet to be described but some preliminary biologic work suggests there will be many. As with any new technology, it is impossible to know the direction of development but if one simply uses the other components of EMF as an example, it is counter intuitive to believe this will not have an impact on health care and the biologic sciences.

I understand that you are responsible for the regulation of all of the commercial utilization of frequency space. My understanding of this technology is that the power requirements are orders of magnitude below the typical emissions from an electric motor on most home appliances. I am aware of the concern of the GPS industry but am not aware of a single demonstration of interference caused by this technology. In fact, I believe that some test showed the typical GPS receiver creates more interference to other receivers in a given range. Thus, though a valid concern, I am not aware of data or demonstrations to support the fears. I would hate to see such a potential benefit to medicine blocked due to political maneuvering for business interest.

I thus strongly urge you to give this revolutionary technology a chance. With the proper safeguards, the rapid development of this technology could have enormous implications in medicine and other health sciences. This is a completely new technology where the United States hold all of the key elements for now. We have been the world leader in new health care technologies. Please don't let this opportunity pass us by!

Respectfully,

Noel Estopinal, M.D., FACRO