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October 13, 2000

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Magalie Roman Salas
Office of the Secretary
Federal Communications Commission
445 12th Street, S.W.
TW-A325
Washington, D.C. 20554

RE: Notice of Proposed Rule Making; FCC 00-163; ET Docket 98-153
Revision of Part 15 of the Commission's Rules
Regarding Ultra-Wide Band Transmission
Systems

To the Commission:

The Aircraft Owners and Pilots Association (AOPA) is the world's largest civil aviation organization representing more than 360,000 pilots who own or fly three-quarters of the nation's 206,000 General Aviation aircraft. General Aviation aircraft comprise 96 percent of the total U.S. civilian air fleet. As the representative of more than one-half of the nation's pilots, AOPA submits the accompanying comments in reply to those in docket 98-153 in the matter of the Federal Communications Commission's proposal to revise Part 15 of the Commission's rules regarding ultra-wide band transmission systems.

In short, AOPA agrees that UWB technology shows great promise for new applications that provide personal convenience and public safety, FCC must not proceed with rulemaking before sufficient independent testing and analyses conclusively prove there will be no interference to safety-critical aviation systems. Delaying any action will help ensure that the billions of dollars invested in GPS and the benefits derived therefrom are secure.

Sincerely,

Douglas S. Helton
Vice President
Air Traffic Services and Technology

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Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of	October 13, 2000
Notice of Proposed Rule Making	FCC 00-163
Revision of Part 15 of the Commission's Rules Regarding Ultra-Wideband Transmission Systems	ET Docket 98-153

REPLY COMMENTS OF THE AIRCRAFT OWNERS AND PILOTS ASSOCIATION

The Aircraft Owners and Pilots Association (AOPA) is the world's largest civil aviation organization representing more than 360,000 pilots who own or fly three-quarters of the nation's 206,000 General Aviation aircraft. General Aviation aircraft comprise 96 percent of the total U.S. civilian air fleet. As the representative of more than one-half of the nation's pilots, AOPA submits the following comments on the Federal Communications Commission's proposal to revise Part 15 of the Commission's rules regarding ultra-wideband transmission systems.

AOPA has reviewed many of the comments and reply comments in docket # 98-153 and offers the following points:

1) The Global Positioning System (GPS) has become a critical safety-of-life service for aviation, search and rescue and various other applications. GPS signal strength is very weak at the receiver and consequently very susceptible to interference. Therefore, extreme caution is needed when considering any rulemaking that could compromise that service and the safety, operational and economic benefits it provides on a global basis. FCC must not permit UWB to use aeronautical navigation service (safety-of-life) frequency bands unless tests prove there will not be interference.

2) AOPA agrees UWB technology shows great promise and could provide many safety and economic benefits. In fact, the aviation community may benefit from some of the proposed applications. However, there is still much not known about the interference potential of UWB technology and further study is warranted and currently under way. It is imperative that no rulemaking be promulgated until those studies are concluded and enough is known about UWB signal characteristics to draft appropriate rulemaking or exemptions there from.

3) The support voiced in a large number of the comments resulted from lobbying by at least one of the UWB proponents and focuses solely on the potential benefits marketed by these proponents. A large percentage of these comments were submitted by public service offices such as fire, police, hospitals and health-care officials that were not given all the facts. Most of these offices rely on GPS for emergency services and had they known there was a threat to GPS by UWB devices, their support for UWB would likely have been more conditional.

4) Most UWB manufactures advocate either tight controls or outright prohibition of UWB operation in the GPS frequency band. For example, XtremeSpectrum, Inc. commented, "Concerns about into sensitive safety services such as GPS must be taken seriously,..." And Multispectral, Inc. commented, "Unfiltered UWB systems (i.e., those utilizing direct impulse or step excitation of an antenna) should not be permitted under Part 15" meaning high-powered devices should require licensing and mitigate potential interference to existing systems. If Part 15 (Part 15 relates to unlicensed devices) is changed and harmful interference occurs, it would be nearly impossible to prevent use of the harmful devices.

5) Many of the applications proposed UWB technology applications will likely require the integration GPS positioning capability in order to realize its full potential. For this reason and those cited above, it is important that the effects of UWB on GPS be fully understood before clearing the way for public proliferation.

6) Time Domain argues that UWB devices should be given the same leeway under Pat 15 that is granted to other devices and specifically mentions personal computers. Although AOPA would support equal treatment, the implication here seems to be they should be granted equal status even if it means interfering with other systems like GPS. AOPA believes that if other such systems interfere with GPS, they should also be subject to regulatory restrictions. In fact, use of personal computers is restricted on airline flights for that very reason. UWB proponents advertise that ultimately there may 8 or more UWB devices per person in the public domain. If true, the combined noise of these devices combined with others in existence should be evaluated and might warrant a review of Part 15 standards.

In summary, AOPA agrees that UWB technology shows great promise for new applications that provide personal convenience and public safety. However, FCC must not proceed with rulemaking before sufficient independent testing and analyses conclusively prove there will be no interference to safety-critical aviation systems.