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## **FCC Reports LPFM Interference Findings to Congress**

Washington - Feb 19, 2004 - Following significant actions of FCC rulemakings, a Presidential Act and Senate inquiry, the FCC has issued a report to the U.S. Senate Committee on Commerce, Science and Transportation and the Committee on Energy and Commerce of the U.S. House of Representatives.

When the FCC authorized LPFM licenses on Jan. 20, 2000 it imposed minimum distance separation requirements consistent with current FM protection standards. The requirements specified spacings between the LPFM stations and first- and second- adjacent stations. The FCC found that LPFM stations would not cause significant interference to third-adjacent channel stations. On Sept. 20, 2000, the Commission, on reconsideration, adopted complaint and license modification procedures to ensure that significant third-adjacent channel interference problems would be resolved expeditiously. On December 21, 2000, President Clinton signed the Act into law, requiring the Commission to impose third-adjacent channel minimum distance separation requirements on LPFM stations and to conduct independent field tests and an experimental program to determine whether the elimination of third-adjacent channel protection requirements would result in LPFM stations causing harmful interference to existing FM stations operating on third-adjacent channels.

On March 22, 2001, the Commission adopted an order imposing third-adjacent channel minimum distance separation requirements on LPFM stations consistent with the third-adjacent channel minimum distance separation requirements currently in effect for full-power commercial and NCE FM stations. In July 2001, the Commission selected the Mitre Corporation to conduct the required LPFM field tests and experimental program, and to prepare a report containing the analyses required by the Act.

Because of budgetary constraints that became apparent at the conclusion of Mitre's market research, the required LPFM field tests and experimental program were divided into two phases. In Phase I, Mitre was required to take LPFM field strength measurements and make high-quality digital recordings, and to analyze the effect of third-adjacent channel LPFM stations on the transition from analog to digital terrestrial radio.

Phase II of the LPFM field tests and experimental program would consist of audience listener tests based on the Phase I digital recordings and an economic analysis of the effect of third-adjacent channel LPFM stations on existing broadcasters.

Mitre completed Phase I of the LPFM field tests and experimental program and delivered its final report to the Commission on June 2, 2003. The Commission accepted the Mitre Report and issued a Public Notice on July 11, 2003, requesting public comment on the Mitre report.

The Mitre Report contains the following conclusions/recommendations concerning LPFM stations and existing third-adjacent channel FM stations:

1. Reduction or elimination of existing third-adjacent channel LPFM minimum distance separation requirements is possible without increasing the potential for third-adjacent channel LPFM interference to existing stations.
2. Adoption of a more stringent third-adjacent channel LPFM emissions mask would mitigate LPFM interference potential because most LPFM transmitters achieve spurious emission suppression in excess of the current mask value.
3. Third-adjacent channel LPFM stations will have little or no effect on the transition to terrestrial digital radio since third-adjacent channel LPFM interference to digital receivers is unlikely to occur beyond 130 meters from the LPFM transmitter.
4. Due to the lack of measurable interference produced by third-adjacent channel LPFM stations during testing, the listener tests and economic analysis scheduled for Phase II of the LPFM field tests and experimental program should not be done.

During the reply comment window, 24 parties filed with the FCC. Eighteen filers support elimination or modification of the existing third-adjacent channel minimum distance separation requirements for LPFM stations. Only three filers supported retention of the third-adjacent channel rules as they currently stand. Most of the others support eliminating or substantially relaxing the third-adjacent channel rules.

Following the Mitre findings and reviewing the filed comments, the FCC has proposed to Congress that several steps should be taken.

The existing third-adjacent minimum distance separation requirements between LPFM stations and existing full-service FM stations and FM translator and booster stations should be eliminated.

The Mitre Report states that, even in the worst case, no third-adjacent channel interference between an LPFM station and an existing full-service FM station will exist beyond a radius of 1.1km around the LPFM transmitter site. According to the Commission, its technical studies similarly showed that LPFM stations do not pose a significant risk of causing interference to existing full-service FM stations or FM translator and booster stations operating on third-adjacent channels.

Congress should re-evaluate the necessity of completing Phase II testing.

The results of Phase I testing call into question the necessity of completing Phase II. In Phase I, the Mitre field tests found that no 100W LPFM station significantly degraded the reception of a full-service station at any distance greater than 126m from the LPFM transmitter. Also, with the exception of a single anomalous result, no significant LPFM-related degradation to the reception of a full-service station was identified at a distance greater than 333m from the LPFM transmitter, a test result based on more than 1,400 measurements.

The FCC report was submitted on a Friday, so Congressional action has not yet occurred.

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