

Frequency Coordination

The Arizona Frequency Coordination Committee (AFCC) is affiliated with the Society Of Broadcast Engineers (SBE) and acts as the Part 74 Frequency Coordinator for the State of Arizona. The AFCC is conducting these digital ENG tests to gather information related to COFDM ENG operations as part of creating its' MSS transition plan. This plan will be used to move the Phoenix DMA from the current 2 GHz bandplan to whatever bandplan is ultimately selected by the FCC as part of FCC dockets ET 95-18 and IB 01-185

While the AFCC is sponsoring these tests, all Phoenix television licensees are very interested in both participating in the testing and analyzing the results of the tests. In fact, in many cases we will be using some of the same facilities, including ENG receive sites, TX and RX antennas, inter-city relays, microwave trucks, etc, owned and used by local TV licensees. This makes the coordination of facilities and frequencies critical.

As part of the regular day-to-day 2 GHz coordination process, each licensee has installed a "hot-line" phone in the stations ENG control point. This allows each station to pick up a phone and directly talk to the ENG controller at another station. Because we will need to work around regular news operations and because stations are already familiar with inter-station coordination using this system, we intend on using this "hot-line" system as a vital part of the coordination during these tests. While the frequency usage is still being worked out, we will probably do much of the testing using 2 GHz channels (1990-2110 MHz) and coordinating in real-time using the above procedures.

Because non-part 74 users share the 2.5 GHz channels (2450-2500 MHz), we will probably minimize use of these frequencies, even though the AFCC acts as the "unofficial" coordinator of these frequencies. Should we need to use 2.5 GHz frequencies, these tests should not be a surprise to the non-part 74 users as many of them are known to the AFCC and are included in the Phoenix Frequency Coordination Listserver. The AFCC listserver has been used to distribute much of the planning for these tests.

Antenna Usage and EIRP Calculations

Many of the tests will be conducted using existing ENG antennas owned by various local Part 74 licensees. It is currently unknown which antennas will be used during each test as the facilities and equipment will be allocated based on what is available. This makes it difficult, if not impossible, to calculate EIRP of the transmitted test signals. In the STA request, we have listed the beamwidth of an antenna representative of what will probably be used during the testing.

While this may make analyzing the data more difficult, we gain the "real-world" experience of using antennas that licensees are currently using and will probably be using after a digital conversion. We will also be able to find out if a certain

antenna is not capable of operating digitally, which is useful information to know while finishing our transition plan.

Interference Control and Reporting

We plan on operating at much lower TX power levels (1-4 watts digital vs. 4-12 watts analog) during digital operations. These power levels, in conjunction with the above listed coordination procedures and the fact that we will be using existing RX sites and TX antennas, should combine to result in little or no additional interference to existing operations. Any interference will be noted as part of the testing procedures but should not affect BAS operations, as the testing must be scheduled around regular news operations.

Interference will be reported to the AFCC through the use of the AFCC listserver or through the use of the existing "hot-line" phones at each station's ENG control point. Should any "breaking-news" event happen that requires the immediate termination of the testing, the ENG control points can contact the ENG truck conducting the test using the "normal" communications channels – the same channels (2-way, cell phone, pagers, etc) they would normally use to communicate to the Live truck.