
The second phase evaluated the performance of HD Radio receivers to decode the digital signal. The summary of the laboratory measurement is as follows:

- The HD Radio service coverage is smaller and contained within the analog service coverage. By comparing with the analog carrier service coverage, i.e. when the audio quality is equal to a $S/N = 30$ dB, the loss in service coverage (in dB) is:
 - Between 2 dB and 12 dB with an injection level of -10 dBc.
 - Between 6 dB and 15 dB with an injection level of -14 dBc.
 - Between 12 dB and 22 dB with an injection level of -20 dBc.
- Co-channel interference exceeds by a large margin the current protection ratio for analog FM.
- First adjacent channel interference also exceeds the protection ratio for analog FM as the digital signal can be decoded with only one sideband. In the rare case where a lower and an upper first adjacent signal interfere with the desired hybrid FM signal, the required D/U will be higher but will only affect a small area.
- Second (and further) adjacent channel interference has the same behaviour as with analog FM where reception is affected by the level of the transmitter's out-of-band emissions. Except for some receivers having intermodulation issues.

7.2 Overall Conclusions

Based on the results of the laboratory measurement and the simulations conducted, the following conclusions can be drawn:

1. The performance of modern analog FM equipment, both transmitters and receivers, exceeds consistently the minimum performance requirements as specified in BPR-3 and BETS-6. Please note that the current technical rules for analog FM broadcasting are based on representative equipment performance from decades ago.
2. As a result, the effective areas where the public can currently receive impairment-free FM broadcasting programming extend well beyond the stations' protected contours as defined by BPR-3, with the exception of areas where these contours are determined by co-channel interference. Compared to the current protection ratios:
 - a. Robustness to co-channel interference has no additional margin;
 - b. Robustness to first adjacent interference has over 13 dB additional margin (average: 21 dB margin);
 - c. Robustness to second adjacent interference has more than 11 dB additional margin;
3. In addition, the improved equipment performance (in terms of better out-of-band emissions from transmitters, and better selectivity from receivers) has permitted operational FM broadcasting assignments on adjacent channels at distances closer than as recommended by BPR-3 (short-spaced assignments) without creating degradation in service.
4. Comparing the system performance when the interferer is analog FM only versus HD Radio, the only interference scenario that resulted in a difference in performance is first adjacent channel.