



# Magnolia Radio Intertie

## *DRAFT STATEMENT OF OBJECTIVES*

- **BACKBONE FOR INTERTIE.** Identify individually-owned existing repeaters in strategic locations from around the state of Mississippi whose owners will commit them to serve the Intertie. These should be RF-linked where ever possible but some may have to be linked via Echolink. This backbone should traverse major population centers in the state as well as major highways such as Interstates and State Highways. The intention for the backbone is that it will be linked full-time.
- **APPLICATION SYSTEM FOR CLUBS AND OTHERS.** With an operational backbone system, the Board develops a system for clubs and other individually-owned repeaters may join the Intertie. This puts the impetus on clubs to handle decision-making about linking their repeater(s) rather than the MRI Board urging them to do so. This application should be valid for one-year with options for renewal. The periods for linking must be consistent with Intertie operational policies adopted by the Intertie Board.
- **APRS DIGIPEATERS AT BACKBONE SITES.** The current state of APRS coverage in Mississippi is poor. One strategy to improve digipeating coverage is for all Intertie backbone sites to also house an APRS digipeater. Investigation of how this phase of Intertie development might approach full coverage of the state will be undertaken by the Board. As described below, this initiative will facilitate the use of APRS trackers by served agencies.
- **DIGITAL VOICE AND DATA SYSTEM TO PARALLEL ANALOG DEVICES.** The current digital system in amateur radio is laden with high-cost and a rapidly changing landscape regarding the voice codec. The current adoption of Icom's DSTAR equipment is clearly leading the pack. However, other standards such as Codec2, FreeDV, P25 and perhaps others represent rapidly developing challenges. Unfortunately, none of them are compatible. After the backbone build-out of the conventional FM analog system and the APRS digipeater coverage, the Board should make a determination as to which digital voice and data protocol it should adopt for this phase of the Intertie system.
- **BROADBAND-HAMNET MESH SYSTEM.** A new technology using 2.4 ghz and 5 ghz spectrum allocations to amateur radio has emerged, modeled largely on commodity WiFi routing systems. The Intertie should educate, encourage, and facilitate clubs across the state to establish “local” mesh networks which are “clusters” spread across the Mississippi. The Intertie should use the backbone to connect local city clusters for the potential of statewide coverage. This technology allows Win-Mail, video, VOIP, web-servers, and connections to the commodity Internet. The Board should investigate how MESH technology might be cross-linked to APRS and digital data capabilities of the Intertie.