

Mobile Assignment Technical System (MASTS)

There is a need to update the channel assignment and coverage prediction tool for the licensing of Land Mobile Radio (LMR) services (covering PMR – Private Mobile Radio, PAMR – Public Access Mobile Radio, CBS – Common Base Station and Maritime Coastal Stations). The current method of assignment is considered to be non-scientific and is based on a Flat-Earth Model (i.e. no consideration of the terrain).

This is all about to change with the advent of the *new* MASTS tool. The MASTS project is now underway, which aims to develop a more accurate and sophisticated technical assignment tool.

The primary functions of MASTS will to:

- Assign Channels more effectively and efficiently (using Quality of Service metrics);
- Be responsive to increasing demand for LMR Spectrum and how it is assigned;
- Provide Spectrum Quality controls;
- Utilise consistent and up-to-date information on LMR spectrum usage for subsequent management and operational exploitation;
- Provide improvement in the technical accuracy of frequency assignment, which should enable more LMR assignments in a given area/band;
- Provide an enhanced customer service by making the E-Licensing process seamless and complete – i.e. apply for a licence and have your frequency assignment returned to you on-line in a matter of minutes (in the majority of cases);
- To provide technical assessment for potential Spectrum trades for PMR.

MASTS will make use of coverage prediction and monitoring data in the assignment process. The current method is two-dimensional and does not allow for terrain or give a feel for how good or bad the coverage will be from a particular site. Currently, a field engineer's experience is drawn upon to assess the viability of a new site, once the initial calculation has been performed. MASTS will determine and assign the most suitable radio channel, based on the initial licensing data held.

Increased efficiency in the assignment of LMR frequencies will facilitate access to suitable frequencies for new LMR applications resultant from new technologies becoming available. The implementation of MASTS provides an opportunity to accommodate new narrow band technology, and it will help to ensure that spectrum is not under-utilised by existing technology in favour of making the under-use channels available for new technology.

MASTS would provide the functionality for more advanced methods of spectrum pricing to be implemented based on individual predicted coverage areas (if required). With an improved method of assignments MASTS will be used to aid the UHF-2 Band Alignment Project.

The new tool will also form part of the public access E-Licensing system, which will enable the public to complete on-line applications through the Internet. MASTS is expected to be available to the Public in the first quarter of 2005 (although this is dependent on other inter-related projects).

If you have any questions please don't hesitate to contact the MASTS Project Manager:

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