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Subject: Open interface to bridge Digital voice modes
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Introduction

During last year's radio amateurs have seen a couple of digital voice modes entering the market. Starting in our Region 2009 with D-STAR we run currently D-Star, DMR, System Fusion (C4FM), APCO P25, TETRA and Nextedge (NXDN).

Background

Main advantage of digital voice communication is the extension of effective range by means of multiple repeater systems, which are interconnected via Internet or HAMNET links to form a network. The Amateur Radio Service is currently operating the larges DMR network on the world with several thousands of repeaters and mini-nodes (HOTSPOTs) connected, covering even remote areas like Antarctica.

Most operating modes used in amateur radio use the very popular AMBE (+) codec and are thus mutually transferable. Thus, it was already possible to connect several digital voice operating modes, which are each connected to their own network systems, with so-called "bridges".

For historical reasons, however, different networking protocols are used. Initially, the existing protocols of the commercial repeater producers were used and reengineered for the networking of the amateur radio systems.

For some years, a separate network protocol for digital voice modes is available. The MMDVM (MultiModeDigitalVoice for Modems) protocol has been defined by radio amateurs from the UK and DL and is the basis in the current connection of terminals and some digital DV networks.

Key points and proposal

In order to make the further development of computer networks more open, at present there are only very few groups which offer networking, and also to enable further groups of developers in the associations to access this topic, it would be urgently necessary to have the amateur protocol MMDVM included in the IARU-R1 VHF handbook as recommendation for an open interface.

Recommendation:

We therefore propose to favour the MMDVM protocol as the basis for the networking of digital voice systems and to prefer this protocol as the basis for the development of new DV networks. We see, through our experience, a high potential and future developments. Not only will there be networks on a proprietary basis in the future, but we see a chance that systems with connection of the different voice modes in a common DV-network arise. The combination of different developments will also be more useful

Financial Implications: none