



International Amateur Radio Union Region 1

Europe, Middle East, Africa and Northern Asia

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SUBJECT	Shortwave links for Digital Communications and Voice		
Society	DARC	Country:	Germany
Committee:	C4, C5	Paper number:	VIE13/C4/14
Contact:	Jochen Berns, DL1YBL	e-mail:	DL1YBL@DARC.DE

Introduction

More and more radio amateurs might close down their station due to man-made noise on HF bands.

Furthermore building of appropriate HF antennas is already difficult in urban areas today and does not allow the use of the HF bands as desired. Digital voice (DV) applications will become more popular in future. Today some local VHF or UHF repeaters are connected worldwide via Internet, if possible. Unfortunately in some areas an Internet connection is not available for several reasons.

One could evaluate whether it might be possible to use HF frequencies for links to connect local VHF or UHF repeaters. After an agreement to use HF for such links, a protocol, frequencies, principles and transfer method for Data, Voice, Video and more has then to be defined.

Background

A common standard for communication in DV or for Data links does not exist yet. Some stations worldwide are using the DSTAR Protocol, with GMSK Modulation and approximately about 6 kHz bandwidth.

It might be possible to develop software for a fading resistant modulation scheme which is comparable to SSB.

Key points and discussion

A discussion should take place whether HF links for DV are possible and desired. Frequencies, methods and transfer characteristics then have to be defined in accordance with the HF bandplan requirements. Such a discussion about this issue should take place in C4 and C5, because both committees are affected.