

News of winter 2009

We welcome you on our site in the winter 2009.

It is pleasant to notice, that the attention of editorial staffs of communication branch magazines even more often addresses to our works. In the expired year only our collective had possibility to execute the offer of editorial staffs and to prepare reviews on applied achievements of the coding theory. It is first number of last year magazine «Digital processing of signals» and last number of leading magazine of Russian Communications Ministry "Electrosvjaz". We have resulted also the list of our basic last publications on MTD to algorithms for expired year and we believe, that the basic directions of our development in respect of improvement of characteristics of decoders of class MПД last year are executed.

The greatest improvement we have achieved in symbolical MTD, that has allowed to achieve for long codes good likelihood characteristics. It is better, than at corresponding to them on codes length Read-Solomon codes. In some cases it appeared, that symbolical MTD is approximately in billion (10^9) times simpler then decoders for RS codes constructed on the basis of a Sudan method on number of operations. And in a number of variants such symbolical MTD characteristics are impossible for RS codes even at use of Sudan's algorithm.

We suggest to pay attention also to updatings of symbolical decoders which more than successfully compete to the commercial programs, most effectively until recently protecting the big files of recorded errors, for example, in DVD disks and the superbig databases. Programs on the MTD basis code and then decode these files faster in tens and hundreds times in comparison to other soft means. And in some cases the symbolical MTD characteristic in general are unattainable for competing commercial products.

Well, and at last, our decoders on FPGA Altera have overcome a Gigabit rate boundary at their rather simple realization. Now decoders for the speed 1 Gbit/s easy to build practically at any other parameters of coding systems. Certainly, the code gain of coding remains thus at the highest level. Corresponding breadboard model MПД of the decoder on this speed is shown in the Space Research Institute of the Russian Academy of Sciences to all interested experts.

Some of our achievements are presented in the Russian magazine «Russian the Space», in its first issue of this year.

Still we offer all interested persons various forms of scientific and technical cooperation with us.

We are ready to consider all offers on a translation into English and publishing of all our basic books and the most interesting articles.

This year new results about simplification of decoders of MTD class and their further improvement will be submitted.