

Sequential Decoding on Syndrome Trellises for Nonparametric Detection

Dmitry Osipov^{1,2}, Dmitry Titov²

¹*Kharkevich Institute for Information Transmission Problems
Russian Academy of Sciences*

Bolshoi Karetnyi pereulok 19, GSP-4, Moscow, 127994, Russian Federation

²*National Research University Higher School of Economics
3, Kochnovsky Proezd, Moscow, Russian Federation
d.osipov@iitp.ru, titovdim93@gmail.com*

The talk adapts the classical Zigangirov–Jelinek algorithm to the decoding of nonbinary block codes under severe mixed jamming. To ensure reliable communications in this scenario we combine reception techniques based on distribution free statistical tests with sequential decoding on syndrome trellises. It will be shown that the proposed approach can ensure relatively high transmission rate with reasonable complexity.

Acknowledgements. Some of the results were obtained by Dmitry Osipov at the IITP RAS and financed by the Russian Science Foundation grant (project No. 14-50-00150).