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**Methods for reducing the amount of computation in modeling lossy communication systems based on ignoring low-probability states.** (English. Russian original) [Zbl 1038.90016](#)

[Probl. Inf. Transm.](#) 37, No. 3, 262-275 (2001); translation from [Probl. Peredachi Inf.](#) 37, No. 3, 82-95 (2001).

Summary: Ways for reducing the amount of computation when estimating capacity characteristics of models of lossy communication systems with product form representation of the stationary probability vector are considered. The algorithm of convolution is applied to the computation of the characteristics. The reduction in computation is due to both decreasing the number of convolutions required for the estimation of service characteristics of all the flows and decreasing the number of operations in performing a single convolution, which is achieved by ignoring low-probability states in the process of computation.

**MSC:**

[90B15](#) Stochastic network models in operations research

[90B22](#) Queues and service in operations research

**Keywords:**

[Poisson traffic flows](#); [convolution algorithm](#); [lossy communication systems](#)

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