

THE EFFICACY OF A LOSS SERVING SYSTEM

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***Abstract:** Optimization solutions based on the application of expectation theory have a broad, but not exhaustive use, in the problems of analyzing and organizing networks in the composition of information systems. Modeling the effectiveness of a loss-serving system with Erlang's system seeks to reject the attack in terms of both economic efficiency and military efficiency.*

***Keywords:** operational research, Erlang equations, mathematical modeling.*

I. Preliminary concepts

The theory of expectation is an essential component of operational research that studies the quantitative aspects of mass serving processes and highlights the organizational side of solving the process or phenomenon analyzed. It does not deal with the qualitative aspect of the serving units, considering them as a complementary, inherent side.

A problem based on the theory of expectation occurs in a process if both the intensity of requests arriving in the randomly assumed system and the number of service stations, as well as the related laws, can be studied and controlled.

Some examples of calculation based on theory of expectation on optimization in the military field can be mentioned¹:

- Determining the optimum channel requirements for the communication networks (average number of channels occupied, average

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¹ Alexandrescu C, Iliana Decebal, Mincu C., *Bazele matematice ale organizării sistemelor de transmisiuni*, Editura Militară, București, 1994, pp 20-60.