Messages Analysis Plan Formation By The Information Network Operator

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Abstract – **the methodology of message analysis plan formation by the information network operator about the parameters of its functioning and state is examined in this article.**

Keywords – **information network, operator, information message.**

I. INTRODUCTION

The basic requirement which is laid down to the work of information network operator is high analysis operationability relating to small time for acceptance of sensible decision by the operator.

Taking into account the character of information network operator tasks , it is obvious, that the most effective is such organization of its activity when the analysis of maximal amount of information messages, according to their importance, is provided.

II. THE METHODOLOGY OF MESSAGE ANALYSIS PLAN FORMATION

The index of operator work efficiency during the information messages analysis which actually describes probability of their service is offered in [1]:

$$W(t_a) = \sum_{i=1}^{n} C_i \cdot P_i\left(\tau_i^{serv} < T^{perm}\right), \qquad (1)$$

where t_a - time of analysis; C_i - importance of information which is contained in the report; $P_i\left(\tau_i^{serv} < T^{perm}\right)$ - probability of correct information processing for time less than T^{perm}; n – amount of message types which are analysed by the information network operator for time of t_a work.

For the account of information message importance it is necessary to find an effective algorithm which allows to carry out the control centralized traffic after manipulation of its values importance, mean time of its analysis and probability of its correct processing. Thus, an algorithm must provide a choice from the stream of exactly those information messages which are the most important and need the least mean time for analysis and also to give the obtainable decision to the information network operator as recommendations [2]. It makes possible to automate the operator work by a choice for the analysis of the most informative and important messages.

Thus, the task of efficiency work increasing of information network operator becomes obvious due to the automation of its actions taking into account the information messages importance and time diminishing of their processing on the basis of information availability index estimation.

It is possible way of development and introduction of the message analysis plan formation methodology by the information network operator which allows to automate its work due to the additional software and dataware.

The result of this methodology must be an optimal sequence of processes implementation of messages analysis with different parameters - a messages analysis plan which is a set of information messages about the parameters of information network and its state in order of their importance decreasing and growth of their mean time analysis.

The basic stages of this methodology are: information messages ranking in order of their importance diminishing and growth of their mean time analysis which is taken to the task decision of optimal planning by the dynamic programming method application; plan “profundity” defining based on the given concerning the «losses» level which are related to the exception of less important information messages and messages with greater time of analysis from the plan.

III. CONCLUSION

The considered methodology allows to promote the efficiency of information network operator work: to automate its work taking into account information messages importance and time diminishing of their processing due to the previous value estimate of information availability. It is possible in the Decision Support Systems, which allows to automate the organization of operator work due to the additional software and dataware.

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