Title: Closed form results for BMAP/G/1 vacation model with binomial type disciplines

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The paper deals with the analysis of BMAP/G/1 vacation models. We apply a formerly introduced two-step methodology separating the analysis into service discipline independent and service discipline dependent parts. In this paper we investigate the later analysis part for the binomial-gated and the binomial-exhaustive service disciplines, for which a specific form functional equation can be established for the vector probability generating function of the stationary number of customers at start of vacations. We provide new results for the model with these disciplines. These are the closed-form expressions of the vector probability generating function of the stationary number of customers at start of vacations, which are applied to express the mean of the stationary number of customers at an arbitrary moment.

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