LETTER TO THE EDITOR

Dear Editor,

Recently Boes (*J. Appl. Prob.* **6** (1969), 459–461) studied the departure process of a particular $M/M/c$ queue. This has the modification that there are only d positions in the waiting room; a customer arriving when all the servers are busy and $i \geqq 1$ waiting positions are unoccupied balks with probability ξ. In this study, the author is interested in showing that under statistical equiqibrium the departure process is Poisson; to do this he proves only that the interdeparture times are exponentially distributed. Clearly this is not a complete proof, as it must also be shown that the interdeparture times are independently distributed. Using routine techniques, one can establish that the result is valid not only for Boes's model but also for its modification with ξ replaced by ξ_i, where the balking probability depends on i, the number of unoccupied positions.

It may be mentioned here that the proof given by Mirasol (*Operat. Res.* **11** (1963), 282–284) to show that that departure process of $M/G/\infty$ is Poisson is not complete either. In this case also the author has overlooked that the independence of interdeparture times is a necessary condition. Considering losses as departures as in Boes (1969), Shanbhag and Tambouratzis, in a work recently submitted for publication, have shown that for the $M/G/s$ loss system, the limiting departure process is Poisson. As an immediate consequence of this, we have the result for the $M/G/\infty$ queueing system. Your readers may be interested in knowing that Mirasol's and and Boes's results require completion in the above mentioned way.

Yours sincerely,

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