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A SEQUENTIAL SOFTWARE RELEASE POLICY

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Abstract. Most existing studies on software release policies use models based on the non-homogeneous Poisson process. In this paper, we discuss a software release policy based on a state space model. The state space model has a Gamma-Gamma type invariant conditional distribution. A cost model that removes errors in software systems and risk cost due to software failure is used. The optimal release time to minimize the expected cost in every test-debugging stage is discussed.

Key words and phrases: Kalman filter, self-exciting point process, open-loop-feedback-optimal control problem, submartingale.