Applications of Polling Systems

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Abstract: Since the first paper on polling systems, written by Mack in 1957, a huge number of papers on this topic has been written. A typical polling system consists of a number of queues, attended by a single server. In several surveys, the most notable ones written by Takagi, detailed and comprehensive descriptions of the mathematical analysis of polling systems are provided. The goal of the present survey paper is to complement these papers by putting the emphasis on applications of polling models. We discuss not only the capabilities, but also the limitations of polling models in representing various applications. Moreover, since the publication of the previous survey papers around 10 till 15 years ago, a large number of papers on polling models has been published. The present survey is directed at both academicians and practitioners.

Keywords: Polling systems, applications, survey

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