1054-60-246 **GERARDO RUBINO*** (rubino@irisa.fr), INRIA, Campus de Beaulieu, 35042 RENNES, France. *On the power of a queueing system.*

The power of a queuing system is a metric proposed by Leonard Kleinrock several years ago. The goal of that proposal was to combine two competing aspects of such a system when it is in equilibrium, its mean response time and its mean throughput, into a single number called power. Basically, the power is the ratio between its mean thoughput and its mean response time, both factors being appropriately scaled. Kleinrock proved some interesting properties of the power metric applied to single server nodes.

In this work, we discuss some other aspects of the power of queuing models. We look at what happens when there are more than one server or more than one node, for instance in case of Jackson networks. We also provide some results in case of a multiclass context. (Received September 15, 2009)