Impact of behavioral factors on performance of multi-server queueing systems

Business, Employee

Recent studies have shown that speeding a process for employees on a queuing in services are influence and accepted on some behavioral factors. A handful of ideas and knowledge should be needed to investigate on why these actions has various effect on the system of waiting time. This research focuses on the response and implication of the workers to the actual form and Situational rate of waiting line where they operate.

Incorporating 2 factors of attitudes into servers on understanding queuing models.

1) employees work capacity and fast movement to elevate workload.

2) employees slowing down because of Social and when some workers shares some workload and workers with the same queuing system.

The numbers of workers varies on the superiority and queuing of each system and amount of time given in the waiting line. The effect of work load is always dependent on the capacity of the workers movement can be separated to the directive effect and the in directive effect of each workers performance.

The result of minimizing the waiting line is to elevate the estimated service rate is under the Direct effect, while indirect effect is related to “ smoothing effect” which is minimizing the waiting rate. Summing up the effect of the two behavioral factors and visualizing the possibilities affect the most. Getting the right values for these behaviors impact beyond how the process performs and react well. With the strategic routings and with what are the possible effects to the level of service that can be produce and the analysis

offered is highly needed in guiding the leaders with the influenced of the waiting line (queuing system designs). (27 April 2018, Do, Shunko, Lucas, Novak)

Estimating waiting time in a queuing system

This study focuses on how clients and employees are affected by queuing or waiting-line can assess their waiting line system itself. The information obtained from current and actual system support the paradigm of Pakan and warren with the use of the observed number in the system of this assessment. It is conclude that the clients over calculated the mean service time but the over calculation isn't dependent on the amount in the system. (January 1981, Warren Jr.)

The Critical Few Minutes in Scheduling Time-Varying Queuing Systems

The nonstaitonary queuing system where demand varies over time, The important practical issue is the scheduling procedures typically involve adding natural time points (an hour and half or half an hour) during peak demand periods. Scheduling is often unadvisable because of restrictions on minimum amount of time (Human) working time. The earliest time server is available and limits on the maximum number of servers that can be used any one time. This research was motivated by experience with actual queuing system that embodied such complications. These system common scheduling methods " natural" starting times for server resulted in needlessly long customer waits. This study shows that the changing starting

times of servers by only few minutes will have a dramatic impact on customer waiting times for more extended time.(07 June 2007, Martinich)

A survey of the evolution of queueing theory

Evolution of waiting-line theory first came from in Teletraffic, Its growth to maturity as mathematical discipline in Research of Operating management, Its present position as an indispensable tool in the performing and analysis of technology Pc –and communication networks. The Dutch postwar has a huge contribution to the continuous evolution of queuing and receive some special attention, on the occasion and celebration of the Dutch Society for Statistic and Operations Research manangement fourth decennium. (June 1985, Boxma)

Modeling and analysis of flexible queueing systems

This Study is considering queuing systems with classes of clients and Capability services in which clients have the flexibility of having more than a single servers who possess the capability of servicing customers than a single clients class. This study provide Concrete framework for the modeling and knowledge about the systems under the arbitrary clients and employee flexibility and for a strict set of control policies which includes customer/server-specific priority schemes for server and clients selection. By reusing models to generate several insights into the impact of system configuration and control agreement and limitations and examining their relationship between each of these Categories: Flexibility, Control Policies and Throughput under varying assumptions for system parameters. (15 June 2004, Benjaafar)

Queueing systems with service interruptions II

Presenting the exact solution method to a single-server queuing system that alternates between exact time-periods when services can be provided (on periods) and periods in which the server itself is out of operation(off-periods). The arrival process is Poisson, on period are assumed to have a phase type distribution and service times are assumed to be arbitrary. (June 1988, Green Federgruen)

Queuing problem with limited waiting space

The queuing are composed and based by Poisson arrivals and has a broad levels of services has been divided and solved by applying the right methods under the condition of limited waiting area. This problem has been already solved by Finch, But he gave only explicit solution for case of exponential distribution. The Phasemethod has a advantage of providing solution in a form which is easy to solved. (1962 december, Jain)