

9.0 Cases that uses ARENA Simulation

1. Improvements of a motor vehicle inspection station through Arena Simulation and motion and time study techniques. Increase in efficiency and production by 174.8%.
2. Simulation for the services provided by post office. The outcome is finding out the limitations of certain sections at the postal service. (Sajadi, 2018)
3. Finding out the queue time at fast food restaurant. Suggesting a new pickup counter to reduce the queue time. (Amit & Ghazali, 2016)
4. To model and simulate hybrid battery swapping stations. The research found out that the average waiting and service time, the number of vehicles in the queue, and the station's electric load are the main performance measures. These measures are predominately determined by the system factors including arrival rate, service rate, and number of spare batteries. (Imani, 2018)
5. Arena uses visual representations of trucks and loaders as entities while a simulation process is running. It works with different types of building blocks that may represent trucks, shovels, crushers, waste dump location, and dynamic processes such as loading, traveling and dumping. Highly accurate results are obtained with graphical representations to support project goals. In addition, the functionality of the software allows analyzing cycle times because the probability distribution based on field data is shaped to scholastic variables. Arena® is able to record and track every activity of cycle times per truck during the simulation to study the impact of this cycle in production and performance (Coronado & Pablo, 2018)

10.0 References

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