



A MATHEMATICAL MODEL TO OPTIMIZE THE OPERATIONS OF A PARCEL CONSOLIDATION TERMINAL

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In this presentation a mathematical model is described to solve the *hub scheduling problem* (HSP). The HSP is a special batch-scheduling problem common to consolidation terminals in the parcel delivery industry. The HSP is defined as follows. A consolidation terminal has a set of inbound trailers. Each inbound trailer contains a number of parcels with varying destinations. At the consolidation terminal, the inbound trailers are to be unloaded by unload personnel and the parcels sorted and routed to the load docks. An outbound trailer is assigned to each load dock. The parcels are loaded onto the outbound trailers which deliver the parcels to other points in the delivery network. The HSP involves assigning the inbound trailers to a fixed number of unload docks with the objective of minimizing the time span of the transferring operation.