
Hubs, or central trans-shipment facilities, allow the construction of a network where large numbers of direct connections can be replaced with fewer, indirect connections. Hub-and-spoke configurations reduce and simplify network construction costs, centralize commodity handling and sorting, and allow carriers to take advantage of scale economies through consolidation of flows. Such networks have widespread application in transportation. This paper presents a structured review of research on the hub network design problem. Three critical design questions need to be considered: (a) are the nodes in the network assigned exclusively to a single hub? (b) are direct node-to-node linkages permitted to bypass the hub facilities? and, (c) are the hub facilities fully interconnected? The nature and difficulty of the hub network design problem depends on the analyst’s judgement with respect to these questions. We review analytical research papers, and give brief empirical examples of eight different network design protocols.