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Load Sharing with Multiple Robots.

ABSTRACT - Masterthesis

The "Load Sharing with Multiple Robots" can be described as a work share among the multiple robots sequentially assembled in a row to track the product and place it at a preferred destination, for which the vision system communicate with the tracking function inserted in RSLogix 5000, version 20. Although the tracking function enables the operation, the robots must however get the guidance from an intermediate module to guide the track positions accurately for each robot individually and increase the maximum picks per minute.

The aim of this thesis is to design an algorithm for "Load Share Filter" which act as an interface between Robot tracking system and Vision System. The algorithm should be able to define the minimum number of robots required to perform the mentioned picks per minute and should be able to assign the track positions to each robot individually. Ultimately the load share must be performed in order to increase the control system maximum picks per minute under the limitation of single robot strength such that no rejections (product track miss) occur.