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# **Creation and Implementation of Customised Production Scheduling Software in a Processed Cheese Factory**

A thesis presented in partial fulfilment of the  
requirements for the degree of

**Master of Technology  
in  
Manufacturing and Industrial Technology**

at Massey University, Palmerston North,  
New Zealand

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2000**

## **Abstract**

This project investigated creating computer algorithms and friendly software interfaces to assist with the scheduling of single stage operations with sequence dependant set-ups and crew rostering problems across multiple lines.

Various techniques and approaches were investigated for reducing the total solution space including, grouping similar items and orders and bucket scheduling. The principles of the Goldratt Method of Scheduling were used.

A Tabu Search algorithm was implemented to search for solutions where total make-span was minimised and probability of missing orders was taken into account in an unreliable production system.

*Microsoft Access* and *Microsoft Visual Basic* were used to create a stand alone application that interfaced with an Manufacturing Resource Planning system.

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