Backtracking Greedy Algorithm for Cutting Stock Pr	
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Abstract	This paper presents a greedy search placemer cutting problem. In the leather manufacturing i hide is of prime importance to maintain profitab generating cut-plans that minimise material wa value. The unique feature of the greedy placer incorporates backtracking which allows previou placement solution can be found. The underlyi (NFP) which describes the boundary around a while just touching the first but without overlap placement constraints into account.
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Backtracking Greedy Algorith

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Abstract. This paper presents a greedy search pla
for the leather stock cutting problem. In the leat
component parts (stencils) form a hide is
Consequently, the development of new approach
waste and which can handle problem constraint
greedy placement algorithm method presented
which allows previous placement steps to be retr
be found. The underlying encoding method is ba
describes the boundary around a stencil shape su
just touching the first but without overlapping.
taking placement constraints into account.

Introduction

The problem of arranging shapes (component pa
as the cutting stock problem. This problem ari
cutting, sheet metal, textile and shoe making.
arrangement of shapes on a rectangular stock p
problems, such as the leather nesting problem [1]
on an irregularly shaped hide (stock) with the ad
requires its own unique lay-plan. Directionality
requirements such as aligning shapes to a fabr
tightness direction).

The overall goal of this research is to investig
optimal cut-plan layouts [2, 3, 4]. New methods
the automatic generation of cut-plan layouts
optimised NC part programs for cutting mach
currently being investigated based on a local g
placement solution around the previous stencil sh

This leather problem is significantly more c
because it has to consider issues relating to the f
its surface with strength and flexibility depend
strategy which is based on finding a placemen
shapes as shapes are placed on the hide one
incorporates a backtracking routine so that the pl
a situation where no solution can be found such a

The paper is structured so as first discuss the l
the implementation of the backtracking greed
discussion section. Finally conclusions are drawn