

SOUTHERN METHODIST UNIVE

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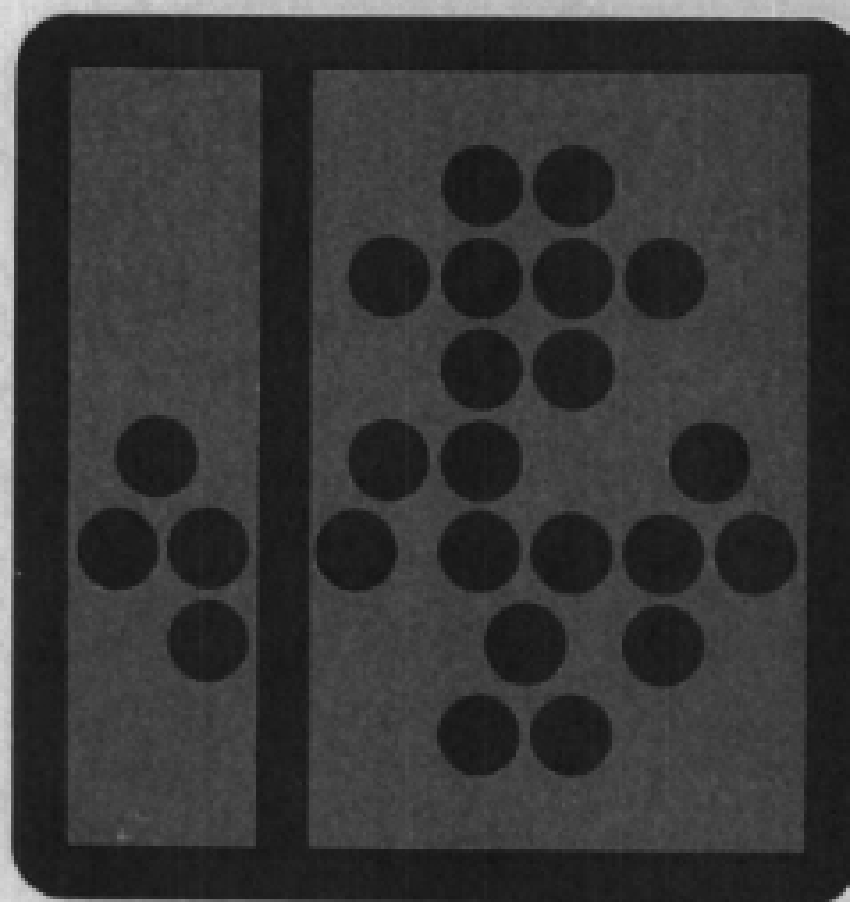
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*OKA: Multi-goal Network
Optimization*

Buddy Rhoads

at
OKA: Multi-goal Network Optimization

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OREM 4390
May 13, 1985



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OKA: Multi-goal Network Optimization

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OKA is an interactive network optimization program that solves multi-goal network problems. After given a set of arcs with multiple costs and limits for those arcs, **OKA** solves the network for both goals, giving the best and worst possible situations for each goal. **OKA** then allows for weights to be set on each of the goals and will then re-evaluate the model and present a graphical analysis of each cost in relation to its best and worst possible cost.

In order to test **OKA**, a network problem based on school integration was modeled to have multiple goals. The first goal was to minimize the distance traveled by students, while the second goal was to minimize penalty costs. These penalty costs are assessed when a school exceeds or does not meet its minority requirements.