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A Network Simplex Method for the Budget-Constrained Minimum Cost Flow Problem

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Highlights

- A network simplex algorithm for the budget-constrained minimum cost flow problem is presented.
- The algorithm is fully combinatorial and based on two kinds of integral node potentials and three kinds of reduced costs.
- We prove optimality criteria and show how cycling can be avoided.
- The algorithm can be implemented to run in pseudo-polynomial time.

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