On the Spanning Arborescence Polyhedron

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ABSTRACT

Fulkerson has shown that the directed cut inequalities along with the nonnegativity constraints completely characterize the dominant of the convex hull of incidence vectors of spanning arborescences in a directed graph. To prove this, he uses Edmonds' linear inequality description of the convex hull of incidence vectors of branchings. Here we introduce a short proof of Fulkerson's theorem which does not use Edmonds' results.