Abstract: The SLOPE estimator is defined as the minimizer of the penalized residual sum of squares where the penalty is the SLOPE norm (a generalization of the l1 norm). Because the objective function is not strictly convex the uniqueness of the minimizer is not obvious. In this presentation we give a necessary and sufficient condition under which the uniqueness of the minimizer occurs. In addition, we show how a geometric condition involving the sign permutahedron gives insights about the accessible models for SLOPE estimator.