One of the most important problems in Algebraic Geometry is the problem of Resolution of Singularities. In the nineteen thirties, Oskar Zariski established a fundamental way of attacking this problem by introducing valuation theory into Algebraic Geometry. Since then, valuations have been important in addressing resolution problems. Valuations give us a way of reducing a global problem, such as resolution, to a local problem. The valuation theoretic analogue of resolution of singularities is Local Uniformization. Zariski proved Local Uniformization (in characteristic zero) in 1944. His proof gives a very detailed analysis of rank 1 valuations, and produces a resolution which reflects invariants of the valuation. In the process to generalize Local Uniformization, Mathematicians ran into certain formal ideals associated to the valuation, called prime ideals of infinite value; which have proved to be important and interesting. In rank 1 valuations, Cutkosky and Ghezzi make essential use of Perron transforms and Zariski’s resolution algorithm in studying such ideals. However, when the rank of the valuation is greater than 1, there is no natural way of defining ideals of infinite value. We were able to solve this problem by appropriately defining these ideals and by generalizing the techniques from the rank 1 case. In this talk, we will present a history of the problem and give the necessary definitions and examples that reflect the motivation and the depth for studying prime ideals of infinite value.