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*Understanding the Blow-up of a Subword Complex Along its Boundary*

A subword complex is a simplicial complex that describes the structure of the set of reduced subwords of a Weyl group element. They appear in the problem of finding a Gorensteinization for Schubert varieties, where it is known that the blow-up of a Schubert variety along its boundary divisor is Gorenstein. This can be shown by degenerating a Kazhdan-Lusztig variety (which provides local equations for the Schubert variety) to a toric scheme defined by the Stanley-Reisner ideal of a certain subword complex. The blow-up of this Stanley-Reisner scheme along its boundary can be used to prove results about the Kazhdan-Lusztig variety. I will provide a combinatorial description for the blow-up of a subword complex, which characterizes the exceptional components in terms of specific reduced words. I will then apply this characterization to find a combinatorial criteria for determining if a given Kazhdan-Lusztig variety is Gorenstein.