David C Lax* (dclax@live.unc.edu), Phillips Hall CB#3250, Chapel Hill, NC 27599. Explicit
Standard Monomial Basis for Coordinatization of Schubert Varieties.
The Plucker embedding of the flag manifold is a concrete projective coordinatization using products of minors of a matrix
as coordinates. These products are nicely indexed by tableaux on a Young diagram. Lakshmibai, Musili, and Seshadri
gave a standard monomial basis for the projective coordinates when restricted to a Schubert subvariety. Reiner and
Shimozono made this theory more explicit by giving a straightening algorithm for the products of the minors in terms of
the right key of a semistandard Young tableau. Since then, Willis introduced scanning tableaux as a more direct way to
obtain right keys. We use scanning tableaux to give more-direct proofs of the spanning and the linear independence of
the standard monomials. This basis is a weight basis for the dual of a Demazure module for a Borel subgroup of GL(n).
As a result, we independently obtain an expression for these Demazure characters as sums of weights over the tableaux
used to index the standard monomial basis. (Received September 21, 2015)