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Iana I Anguelova* (anguelovai@cofc.edu), College of Charleston, Math Department, 66 George Street, Charleston, SC 29424. *Bicharacter construction for the boson-fermion correspondence of type B*. Preliminary report.

The charged free boson-fermion correspondence plays an important role in the representation theory of the a_∞ algebra, as well as for the KP hierarchy. It is an isomorphism between two super vertex algebras (and so with singularities in the OPEs only of the type $z = w$). The boson-fermion correspondence of type B plays a similar role in the representation theory of the b_∞ algebra and for the BKP hierarchy. The vertex operators describing it have singularities in the OPEs at both $z = w$ and $z = -w$, and thus need a more general notion than a super-vertex algebra. This is the simplest, and important, example of what we call a " T -generalized vertex algebra". In this talk we present a bicharacter construction for this collection of vertex operators, which will then be used for studying the properties of the corresponding T -generalized vertex algebra. This talk will serve as a motivation for the definition of a T -generalized vertex algebra, and for the talk by Maarten Bergvelt " T -Generalized Vertex Algebras and Twisted Modules". (Received September 05, 2010)