Richard Rochberg (rr@math.wustl.edu) Department of Mathematics,

Washington University, St Louis, MO 63130, USA, ***Bilinear forms on the Dirichlet space.***

ABSTRACT. By a Hankel form on the Dirichlet space we mean a bilinear form, B, whose value only depends on the product of its arguments: $B(f,g) = L(fg)$. In joint work with Arcozzi, Sawyer and Wick we have given the boundedness criterion for such forms. The result is completely analogous at a formal level to the results for boundedness of Hankel forms on the Hardy and Bergman spaces. However in contrast to Hardy and Bergman spaces, the Dirichlet space is a potential space and hence, not surprisingly, capacity estimates play a central role in the analysis I will discuss the background of our result, the proof, and some related open questions.