1022-30-19 **Stephen W. Semmes*** (semmes@rice.edu), Department of Mathematics, Rice University, Houston, TX 77251. *A few remarks concerning Clifford holomorphic functions.* Preliminary report.

A nice feature of a Clifford holomorphic function a on an open set $U \subseteq \mathbf{R}^n$ is that the size of the differential $d_p a$ of a at any point $p \in U$ can be estimated by the size of the restriction of $d_p a$ to any hyperplane in the tangent space at p. This condition makes sense for arbitrary vector-valued functions, and it implies in particular that if $d_p a$ vanishes on such a hyperplane, then $d_p a = 0$. This property basically amounts to quasiregularity when $n = 2$ and behaves well with respect to compositions with quasiregular mappings on $\mathbf{R}^n$ for any n. For a vector-valued function a on a metric space one can consider estimates for local Lipschitz constants for a in terms of the corresponding constants for $a + b\,c$ when b is real-valued and c is a constant vector. (Received August 20, 2006)