Let $X$ be a compact Hausdorff space and $C(X, \mathbb{R}^k)$ be the space of vector valued continuous functions from $X$ to $k$–dimensional Euclidean space $\mathbb{R}^k$.

The best approximation in $C(X, \mathbb{R}^k)$ for $k \geq 2$ is fundamentally different from the best approximation in $C(X, \mathbb{R})$ where Lipschitz continuity of order one and strong uniqueness of order one are essentially equivalent.

We present a formula for the local Lipschitz constant for uniform approximation of $f$ on a discrete subset $X$ of $[-1,1]$ from a generalized Haar subspace of dimension $n$ in $C(X, \mathbb{R}^k)$, under the restriction that $X$ has exactly $n+1$ points. (Received September 21, 2009)