ABSTRACT. In [1], W. Wolibner proved the following theorem:

Let $a \leq t_1 < t_2 < ... < t_n \leq b$ be real numbers and let P be the set of all real polynomials on $[a, b]$. For each f in $C([a, b])$ and each $\varepsilon > 0$, there exists p in P such that (relative to the **uniform norm**)

$$a) \;\; ||f - p|| < \varepsilon, \quad b) \;\; p(t_i) = f(t_i), i = 1, 2, ..., n \quad and \quad c) \;\; ||p|| = ||f||.$$

We were led by this result to make the following definition.

Definition. Let X be a real normed vector space, let M be a dense subspace of X, and let $\{x_1^*, x_2^*, ..., x_n^*\}$ be a finite subset of the dual space X^*. Then $(X, M, \{x_1^*, ..., x_n^*\})$ has property **SAIN** (simultaneous approximation and interpolation with norm-preservation) if for each $x \in X$ and $\varepsilon > 0$, there exists m in M with (i) $||x - m|| < \varepsilon$, (ii) $x_i^*(m) = x_i^*(x), i = 1, 2, ..., n$, and (iii) $||m|| = ||x||$.

Thus Wolibner's Theorem asserts that $(C[a, b]), P, \{e_{t_1}, ..., e_{t_n})$ has SAIN for any choice of points $t_1, t_2, ..., t_n$ in $[a, b]$. (Here e_t in $C([a, b])^*$ denotes the point-evaluation functional at t in $[a, b]$).

We show, more generally, that *if T is a compact Hausdorff space, A a dense subalgebra in $C(T)$, and $t_1, ..., t_n$ points in T, then $(C(T), A, \{e_{t_1}, ..., e_{t_n}\})$ has property SAIN.* In a Hilbert space, property SAIN can be completely characterized as follows. *Let M be a dense subspace of the real Hilbert space X and $\{x_1^*, ..., x_n^*\} \subset X^*$. Then $(X, M, \{x_1^*, ..., x_n^*\})$ has property SAIN if and only if the representer of each x_i^* is in M.*