1047-47-194 **William Arveson*** (arveson@math.berkeley.edu), Department of Mathematics, University of California, Berkeley, CA 94720. *Hyperrigid operator systems.*

A (finite or countably infinite) set G of generators of an abstract C^*-algebra A is called *hyperrigid* if for every faithful representation of A on a Hilbert space $A \subseteq \mathcal{B}(H)$ and every sequence of unital completely positive linear maps $\phi_1, \phi_2, \dots$ from $\mathcal{B}(H)$ to itself,

$$\lim_{n\to\infty} \|\phi_n(g) - g\| = 0, \forall g \in G \implies \lim_{n\to\infty} \|\phi_n(a) - a\| = 0, \forall a \in A.$$

We show that one can determine whether a given set G of generators is hyperrigid by examining the noncommutative Choquet boundary of the operator space spanned by $G \cup G^*$. We present a variety of concrete applications and discuss open problems and conjectures. (Received January 28, 2009)