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algebras generated by unimodular functions.*

ABSTRACT. To a uniform algebra A on a compact Hausdorff space X we associate the algebra \tilde{A} of sequences $\tilde{f} = \{f_n\}$ with $f_n \in A$ and $\|\tilde{f}\| = \sup_n \|f_n\| < \infty$. \tilde{A} may be regarded as an algebra of bounded continuous functions on $\mathbf{N} \times X$, and so as a (possibly non-separating) Banach subalgebra of $C(\tilde{X})$, where $\tilde{X} = \beta(\mathbf{N} \times X)$ is the Stone – Čech compactification of $\mathbf{N} \times X$. The interplay between properties of A and properties of \tilde{A} is a subject of great interest. In particular, if X is the spectrum of A , the density of $\mathbf{N} \times X$ in the spectrum of \tilde{A} is equivalent to a certain uniform corona theorem for A , and if A were, say, a polydisc algebra, it would give the corona theorem for A (facts which were known in the late sixties). We show that if (like a polydisc algebra) A is generated by unimodular functions on its Šilov boundary, then so is \tilde{A} ; we then make further observations on the connection with corona problems.