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Ernie Manes* (manes@mtdata.com), 321 Truce Road, Conway, MA 01341. *A topological interpretation of Börger's theorem.* Preliminary report.

A space is said to be **totally separated** if distinct points can be separated by clopen sets. Every space has a totally separated reflection. In 1987, Börger proved that a set functor T which preserves binary coproducts admits a unique ultrafilter-valued natural transformation which is a monad map if T is a monad. Let T be such a monad, and factor the induced monad map into its image $\rho : T \rightarrow H$ so that H is a coproduct preserving submonad of the ultrafilter monad. Each T -algebra is a topological space whose closed sets are its subalgebras. The following hold: (1) HX is Urysohn and extremally disconnected; (2) Every infinite closed subset of $H\omega$ contains a copy of $H\omega$; (3) ρ_X is the totally separated reflection of TX ; (4) the H -algebras constitute the variety of T -algebras generated by $1 + 1$ and are a full subcategory of **Top**. When either T or H has countable rank, all compact metric spaces are H -algebras. (Received September 24, 2010)