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Inverse Limits with Upper Semi-continuous Functions That Are Unions of Mappings. Preliminary report.

We will review the definition of inverse limits on compact Hausdorff spaces using upper semi-continuous set-valued bonding functions and discuss a few examples. We will follow this by outlining a proof of the following theorem.

Theorem. *If $f : [0, 1] \rightarrow 2^{[0,1]}$ is an upper semi-continuous function that is the union of finitely many mappings, then the inverse limit with f as the only bonding function is a one dimensional continuum.* (Received September 07, 2007)