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A NOTE ON INVERSE LIMITS OF CONTINUOUS IMAGES OF ARCS

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Abstract

The main purpose of this paper is to prove some theorems concerning inverse systems and limits of continuous images of arcs. In particular, we shall prove that if $\mathbf{X} = \{X_a, p_{ab}, A\}$ is an inverse system of continuous images of arcs with monotone bonding mappings such that $\mathrm{cf}(\mathrm{card}(A)) \neq \omega_1$, then $X = \lim \mathbf{X}$ is a continuous image of an arc if and only if each proper subsystem $\{X_a, p_{ab}, B\}$ of $\mathbf{X}$ with $\mathrm{cf}(\mathrm{card}(B)) = \omega_1$ has the limit which is a continuous image of an arc (Theorem 18).

Keywords. Inverse system and limit, continuous image of an arc.
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