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On perfect compactifications of topological spaces

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# ON PERFECT COMPACTIFICATIONS OF TOPOLOGICAL SPACES

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The following theorem gives a stronger result than a theorem of S. EILENBERG and K. KURATOWSKI contained in his communication at the Symposium.

**Theorem.** *Let $X_1$, $X_2$ be connected Tychonoff spaces and $Y_1$, $Y_2$ any compactifications of them. If $H^1 Y_i = 0$ and* ind $(Y_i \setminus X_i) = 0$, $i = 1, 2$, *then every homeomorphism $h : X_1 \to X_2$ has an extension $\tilde{h} : Y_1 \to Y_2$ which is a homeomorphism.*

This theorem follows from the fact that $Y_i$ is equal to the minimal perfect compactification $\mu X_i$ defined in the author's note „О совершенных бикомпактных расширениях", Докл. АН СССР, *137,* No 1, (1961), 39–41.