Let X and Y be locally compact Hausdorff spaces, and f a continuous mapping of X into Y. Let X^* and Y^* be the one opint compactifications of X and Y, and f^* the mapping of X^* into Y^* whose restriction to X is f and which takes the point at infinity in X^* into the point at infinity in Y^*.

Show that f is proper if and only if f^* is continuous.