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ON TWO PROBLEMS OF HARRIS CONCERNING *RC*-PROXIMITIES

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ABSTRACT. We give an example that settles the first and third problems posed recently by Douglas Harris [1]. The example shows that comparable *RC*-proximities on an *RC*-regular space need not give rise to comparable regular-closed embeddings, and that an *RC*-regular space need not have a largest regular-closed embedding.

Consider the minimal regular but not completely regular space Z constructed in [2]. Let T be the dense discrete subspace of Z consisting of points none of the coordinates of which are infinite limit ordinals. Let δ be the discrete proximity on T and let δ' be the *RC*-proximity on T induced by the unique *RC*-proximity on Z. Then $\delta > \delta'$ and the ideal spaces corresponding to δ, δ' are βT and Z respectively. Since Z is not compact, there is no continuous function from βT onto Z and hence βT is not larger than Z. It is now also clear that T has no largest regular-closed embedding.

REFERENCES

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