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# CARDINAL INVARIANTS OF THE TOPOLOGY OF UNIFORM CONVERGENCE ON COMPACT SETS ON THE SPACE OF MINIMAL USCO MAPS

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ABSTRACT. For a Baire space $X$ the set of all minimal USCO real-valued maps on $X$ coincides with the space $D^*(X)$ of locally bounded densely continuous real-valued forms on $X$. When $X$ is a locally compact space, the space $D^*_k(X)$ of locally bounded densely continuous real-valued forms on $X$, under the topology of uniform convergence on compact sets, is a locally convex linear topological space. This paper gives characterizations and bounds for the cardinal function properties on $D^*_k(X)$ of character, pseudocharacter, density, weight, netweight and cellularity. Examples are given to show how these properties can be the same or different. We answer also some questions posed in [**17**].

**1. Introduction.** For Hausdorff spaces $X$ and $Y$, a *densely continuous form* from $X$ to $Y$ [**12**] is the closure in $X \times Y$ of $f \restriction C(f)$, where $f$ is a function from $X$ to $Y$ such that the set of points $C(f)$ in $X$ at which $f$ is continuous is dense in $X$ and where $f \restriction C(f)$ is the restriction of $f$ to $C(f)$ (considered as a subset of $X \times Y$).

A densely continuous form can be considered as a set-valued map that has a kind of minimality property found in the theory of minimal USCO maps. These are maps, first appearing in complex analysis, that have been studied in many papers; for example, see [**5, 8**].

The set $D(X, Y)$ of all densely continuous forms from $X$ to $Y$ contains several subsets of interest. It contains the set $C(X, Y)$ of all continuous functions from $X$ to $Y$. If $X$ is a Baire space and $Y$ is locally compact and second countable, then $D(X, Y)$ contains the functions from $X$ to $Y$ that have closed graphs. If $X$ is a Baire space and $Y$ is a metric

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