Ompactification of Completely Regular Frames based on their Cozero Part

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Extended Abstract

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Let L be a frame. We denoted the set of all regular ideals of $cozL$ by $rId(cozL)$. The aim of this paper is to study these ideals. For a frame L, we show that $rId(cozL)$ is a compact completely regular frame and the map $j_c : rId(cozL) \to L$ given by $j_c(I) = \bigvee I$ is a compactification of L which is isomorphism to its Stone–Čech compactification and is proved that j_c has a right adjoint $r_c : L \to rId(cozL)$, given by $r_c(a) = \{x \in cozL : x \prec\prec a\}$. Moreover we identify prime and compact elements of $rId(cozL)$ and we investigate the relation between regular ideals of $cozL$ and P-frames. In addition it is shown that a frame L is a P-frame iff any ideal of $cozL$ is regular.

Keywords: Compactification, Completely regular frame, Regular ideal, Cozero part of a frame, Stone–Čech compactification

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