Closure schemes on topological spaces

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Abstract

In my master thesis "Topologies generated by adding single points", supervised by Prof. Petr Simon, I studied relations between the classes of Fréchet–Urysohn, radial, discretely Whyburn, and Whyburn spaces (and their iterated variants – sequential, pseudoradial, weakly discretely Whyburn, and weakly Whyburn spaces, respectively).

I will present the notion of closure scheme, which serves as an abstraction over the classes mentioned. We show how the standard results on preservation properties of the classes follow from more general propositions formulated in the abstract setting. Then we summarize the big picture of inclusions between the classes and list some counterexamples for the reverse inclusions.