

Pointless Parts of Completely Regular Locales

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(Completely regular) frames generalize (Tychonoff) spaces; indeed, the passage from a frame to its spatial part is a well understood epireflection. But a frame also possesses an equally important pointless part, and with morphisms suitably restricted, the passage of a frame to its pointless part is also an epireflection. Our main theorem is that every frame can be uniquely represented as a subdirect product of its pointless and spatial parts, again with suitably restricted projections. We then exploit this representation by showing that any frame is determined by (what may be described as) the placement of its points in its pointless part.

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