

## A COMMON APPROACH TO DIRECTOIDS WITH AN ANTITONE INVOLUTION AND $D$ -QUASIRINGS

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### Abstract

We introduce the so-called  $DN$ -algebra whose axiomatic system is a common axiomatization of directoids with an antitone involution and the so-called  $D$ -quasiring. It generalizes the concept of Newman algebras (introduced by H. Dobbertin) for a common axiomatization of Boolean algebras and Boolean rings.

**Keywords:** directoid, antitone involution,  $D$ -quasiring,  $DN$ -algebra,  $\alpha$ -mutation.

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