Cometric Q-antipodal association schemes - uniformity and linked systems

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Motivated by cometric Q-antipodal association schemes (the dual version of antipodal distance-regular covers), we discuss uniform imprimitive association schemes. Combinatorially (and informally) these are linked systems of incidence structures such as symmetric designs and partial geometries.

We will introduce related concepts such as the dismantlability of a scheme, and dual-antipodality, which allow us to show that each cometric Q-antipodal association scheme is uniform.

We will also discuss some examples, in particular those related to the Hoffman-Singleton graph, the Van Lint-Schrijver partial geometry, and hemisystems of generalized quadrangles.