1020-94-174 **Ray Hill**, University of Salford, Salford, M5 4WT, England, and **Harold Ward***
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22904. *Towards a classification of three-dimensional Griesmer codes.* Preliminary report.

This paper aims at a determination of codes meeting the Griesmer bound by a classification of $((q+1)n, n)$ generalized minihypers in $PG(2, q)$. These are multisets: each point of the plane has a multiplicity, and the strength of a line is the sum of its point multiplicities. The minihyper requirement is that each line has strength at least n, with some line having strength exactly n. When $1 \leq n \leq q - 1$, the code corresponding to the minihyper meets the Griesmer bound. A crucial observation is that from any $((q+1)n, n)$ minihyper H we can obtain a $((q+1)(n+1), n+1)$ minihyper K by selecting a line and increasing its point multiplicities by 1. Minihyper K is a "child" of its "parent" H, and classification focuses on minihypers that are "orphans" with no parent. This inductive set-up expedites the search for Griesmer codes. There is a divisibility result parallel to one for codes meeting the Griesmer bound, but somewhat stronger. Divisibility simplifies the determination of orphans, and geometric objects such as arcs and blocking sets often occur in the descriptions. We shall outline our work and present some constructions and nonexistence results. (Received August 27, 2006)