On generalized digital lines *

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Abstract. In the present paper, we introduce and study the concept of *generalized digital lines*, say $(\mathbb{Z}, \kappa(q, n))$, where q and n are positive integers with $2 \leq q < n$ and $n \not\equiv 0 \pmod{q}$; especially, for $q = 2$ and $n = 3$, $(\mathbb{Z}, \kappa(2, 3))$ is identical with the digital line $(\mathbb{Z}, \kappa)$ (=the Khalimsky line due to E.D. Khalimsky).