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**Gary Chartrand** and **David J. Erwin\*** (david.erwin@wmich.edu), Department of Mathematics and Statistics, Western Michigan University, Kalamazoo, MI 49008, and **Frank Harary** and **Ping Zhang**. *Radio labelings of graphs.*

Informally, a radio labeling is a simplified, abstract model of FCC regulations governing the assignment of frequencies to commercial FM stations. Formally, a radio labeling of a connected graph  $G$  is an assignment of distinct positive integers to the vertices of  $G$ , with  $x$  labeled  $c(x)$ , such that  $d(u, v) + |c(u) - c(v)| \geq 1 + \text{diam } G$  for every two distinct vertices  $u, v$  of  $G$ . The radio number  $\text{rn}(c)$  of a radio labeling  $c$  of  $G$  is the maximum label assigned to a vertex of  $G$ . The radio number  $\text{rn}(G)$  of  $G$  is  $\min\{\text{rn}(c)\}$  over all radio labelings  $c$  of  $G$ . We shall discuss some results on radio numbers and radio labelings. (Received October 02, 2000)