1014-47-1111   **Vern I. Paulsen*** (`vern@math.uh.edu`), Department of Mathematics, University of Houston, Houston, TX 77204, and **Bernhard G. Bodmann**. *Frame Paths and Sigma-Delta Quantization.*

Benedetto, Powell and Ylimaz have introduced the use of the sigma-delta algorithm to the frame coefficients of a vector in order to minimize the errors introduced by quantization schemes. Building on their ideas, we introduce the concept of a frame path and frames obtained by sampling and prove that in such cases the errors can be bounded by the total directional variation of the path. We then study the problem of finding the frame path of minimal total directional variation. (Received September 27, 2005)