Fig. 7.7. A Wavelet Tour of Signal Processing, $3^{\text{rd}}$ ed. Wavelet coefficients $d_j[n] = \langle f, \psi_{j,n} \rangle$ calculated at scales $2^j$ with the cubic spline wavelet. Each up or down Dirac gives the amplitude of a positive or negative wavelet coefficient. At the top is the remaining coarse signal approximation $a_J[n] = \langle f, \phi_{J,n} \rangle$ for $J = -5$.