

FIGURE 6.3
Basis vectors (for $N = 16$) of some commonly encountered transforms: (a) Fourier basis (real and imaginary parts), (b) discrete Cosine basis, (c) Walsh-Hadamard basis, (d) Slant basis, (e) Haar basis, (f) Daubechies basis, (g) Biorthogonal B-spline basis and its dual, and (h) the standard basis, which is included for reference only (i.e., not used as the basis of a transform).

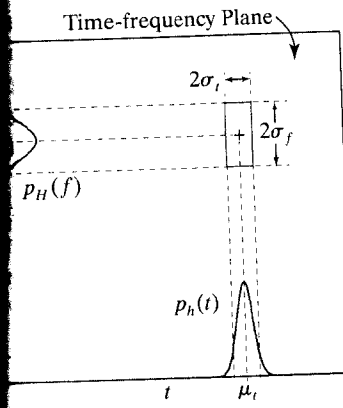
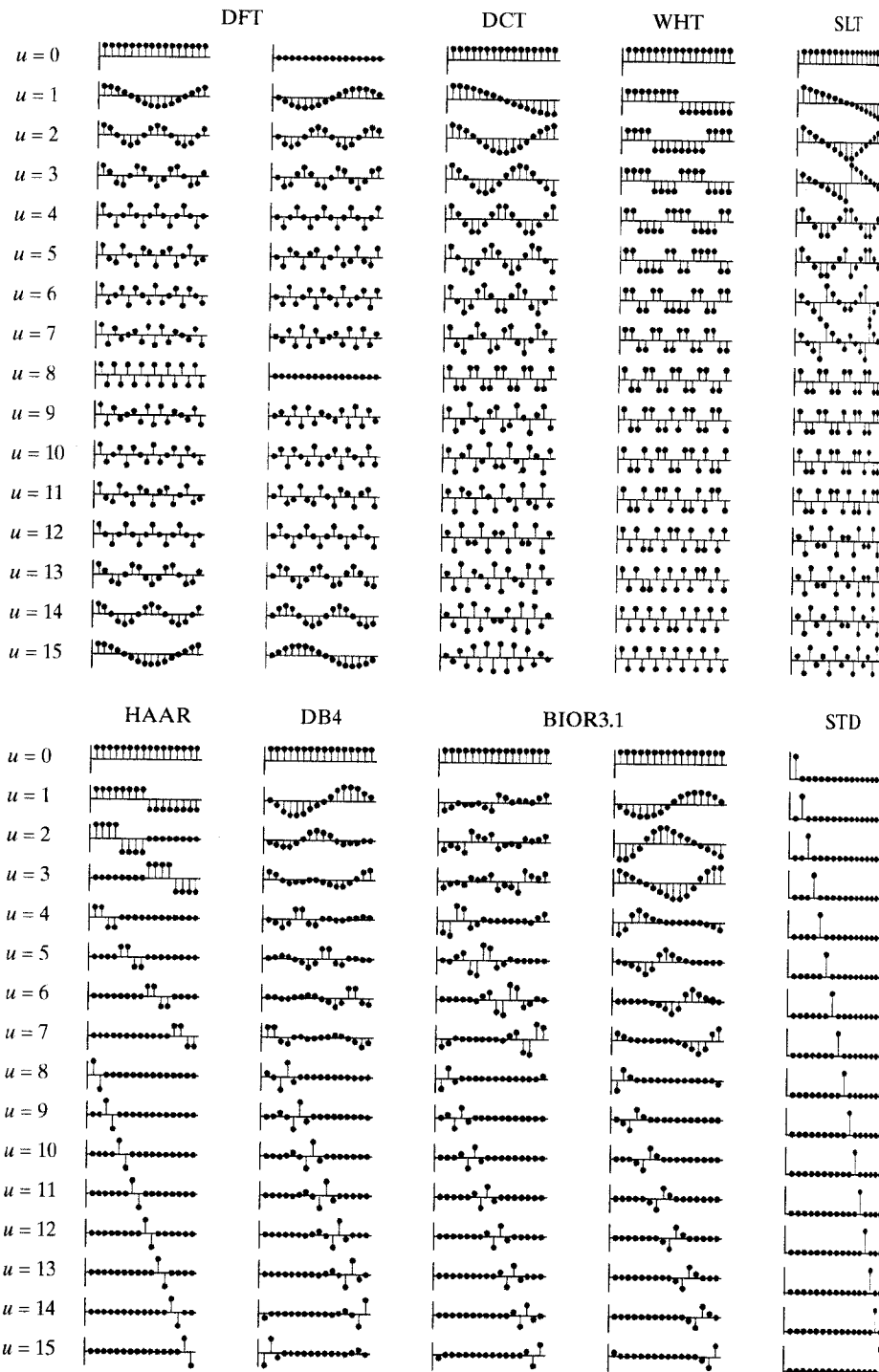


FIGURE 6.4 (a) Basis function localization in the time-frequency plane as solid and dashed lines, respectively.

where f denotes energy† of basis on the time-called a Hei.

Since the function is non-zero, the Heisenberg cell in Thus, while $\sigma_t = 0$ since That is, since The result frequency is partially non-zero $\mathfrak{F}\{\exp(2\pi j f t)\} = \delta(f - f_0)$. The small in he is accompa Returni basis in Fi.

†The energy c