Errata and minor comments to the book by I. Daubechies, *Ten lectures on wavelets*

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These are errata and minor comments to the book

I. Daubechies, *Ten lectures on wavelets*, Regional Conference Series in Applied Math. 61, SIAM, 1992.

p.159 below and p.160 above For the derivation of the two formulas on p.159 below and p.160 above it is helpful to make the following observation. If $f(\xi) = \sum_{n\in\mathbb{Z}} b_n e^{-in\xi}$ is a 2π-periodic function which has support within $I + 2\pi\mathbb{Z}$, where I is an interval of length π, then $f(\xi) = f(\xi) + f(\xi+\pi) = 2\sum_{m\in\mathbb{Z}} b_{2m} e^{-2im\xi}$ for $\xi \in I$.

p.160, l.4 Replace a^L_{2n-m} by a^H_{2n-m}.

p.161, formula above fig. 5.10 Replace c^1 by c^0 and c^2 by c^1.

p.162, ninth until sixth line above (5.6.13)
Replace the sentence starting with “Unfortunately” by:

Unfortunately, there exists only trivial FIR a^0 so that $a^0(z)^2 - a^0(-z)^2 = 2z^{-2n-1}$, which would identify $\tilde{c}(z)$ with $z^{-2n-1}c(z)$, i.e., the reconstructed signal is the original signal with time delay $2n+1$. This trivial FIR is $a^0(z) = \lambda z^{-2(n-m)} + (2\lambda)^{-1} z^{-2m-1}$.

In the next sentence replace “close to 2” by “close to $2z^{-2n-1}$ ”.

p.204, (6.5.5) Replace $j > 0$ by $j \geq 0$.

p.212, Note 8 In fact, ψ can also be computed by the cascade algorithm. For this, take in (6.5.4) the right-hand side equal to zero, and add the condition $\langle f, \psi_{0,n}\rangle = \delta_{0,n}$. Then replace in (6.5.6) h_{n-2k} by g_{n-2k}.