

Correspondence

Errata to “Z-Transform Implementation of the Perfectly Matched Layer for Truncating FDTD Domains”

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In [1], (15), (16), and (17) should be written, respectively, as

$$\begin{aligned} D_{z_i,j,k+\frac{1}{2}}^{n+1} &= D_{z_i,j,k+\frac{1}{2}}^n \\ &+ \frac{\Delta t \left(H_{y_i+\frac{1}{2},j,k+\frac{1}{2}}^{n+\frac{1}{2}} - H_{y_{i-\frac{1}{2}},j,k+\frac{1}{2}}^{n+\frac{1}{2}} \right)}{\Delta x} \\ &+ g_{zx1}(i) f_{zx_{i,j,k+\frac{1}{2}}}^n \\ &- \frac{\Delta t \left(H_{x_i,j+\frac{1}{2},k+\frac{1}{2}}^{n+\frac{1}{2}} - H_{x_{i-\frac{1}{2}},j,k+\frac{1}{2}}^{n+\frac{1}{2}} \right)}{\Delta y} \\ &- g_{zy1}(j) f_{zy_{i,j,k+\frac{1}{2}}}^n \end{aligned} \quad (15)$$

$$\begin{aligned} f_{zx_{i,j,k+\frac{1}{2}}}^{n+1} &= g_{zx2}(i) f_{zx_{i,j,k+\frac{1}{2}}}^n \\ &+ \frac{\Delta t \left(H_{y_i+\frac{1}{2},j,k+\frac{1}{2}}^{n+\frac{1}{2}} - H_{y_{i-\frac{1}{2}},j,k+\frac{1}{2}}^{n+\frac{1}{2}} \right)}{\Delta x} \end{aligned} \quad (16)$$

$$\begin{aligned} f_{zy_{i,j,k+\frac{1}{2}}}^{n+1} &= g_{zy2}(j) f_{zy_{i,j,k+\frac{1}{2}}}^n \\ &+ \frac{\Delta t \left(H_{x_i,j+\frac{1}{2},k+\frac{1}{2}}^{n+\frac{1}{2}} - H_{x_{i-\frac{1}{2}},j,k+\frac{1}{2}}^{n+\frac{1}{2}} \right)}{\Delta y} \end{aligned} \quad (17)$$

REFERENCES

[1] O. Ramadan and A. Y. Oztoprak, “Z-transform implementation of the perfectly matched layer for truncating FDTD domains,” *IEEE Microwave Wireless Comp. Lett.*, vol. 13, pp. 402–404, Sept. 2003.

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