

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

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

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

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

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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