Comments and Corrections

Corrections to "Propagation Along Thin Conductors Parallel to Interfacing Homogeneous Half-Spaces"

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Some typographical errors occur in paper [1]. Equation (25) should read as follows:

$$H_z = \frac{\gamma^2}{j\omega\mu} A_z^*. \tag{25}$$

In Section II-C, the coefficient appears as c_0, it should be c_{11}.

Equation (65) should read as follows:

$$\frac{j\gamma_c I}{2\pi\left(\sigma_c + j\omega\varepsilon_c\right) a} \frac{I_0\left(j\gamma_c a\right)}{I_1\left(j\gamma_c a\right)} + \frac{j\omega\mu_1 I}{2\pi}\left[\frac{\gamma_1^2}{k_1^2}\left(K_0\left(\gamma_1 a\right)\right.\right.$$
$$\left.\left. -K_0\left(2\gamma_1 h\right)\right) + 2\int_0^\infty F\left(\lambda\right) e^{-2u_1 h} \cos\left(\lambda a\right) d\lambda\right] = 0. \tag{65}$$

The transform pair, (76) and (77), should read as

$$I_j\left(z\right) = \int_{-j\infty}^{j\infty} I_j\left(\Gamma\right) e^{-\Gamma z} d\Gamma \tag{76}$$

where

$$I_j\left(\Gamma\right) = \frac{1}{2\pi j}\int_{-\infty}^{\infty} I_j\left(z\right) e^{\Gamma z} dz. \tag{77}$$

From the correction to the transform pair, it follows that the limits of integration with respect to Γ require correction in (78)–(81) so that they correspond to those of corrected equation (76).

Although the integral with respect to Γ vanishes in the equations for the self- and mutual impedance and admittance of the multiconductor system, (76) is important for determining the expression for the current in the jth conductor with respect to z, so it is important the correction to the transform is realized.

Finally, (88) should read as follows:

$$Z_{12}^{jp} = \frac{j\omega\mu_1}{\pi}\left[Q_{12}^{jp} - jP_{12}^{jp}\right]. \tag{88}$$

All other results and conclusions made in the paper remain unchanged.

References

[1] B. Pawlik, D. Woodhouse, and T. J. Summers, "Propagation along thin conductors parallel to interfacing homogeneous half-spaces," vol. 60, no. 1, pp. 266–275, Feb. 2018.

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