

Comments and Corrections

Correction to “On the Capacity of Narrowband PLC Channels”

Nir Shlezinger^{ib} and Ron Dabora

IN [1], the first equation in Theorem 2 on page 1195 contains an error, where ρ should be replaced with $N_0 \cdot \rho$.

The correct Theorem 2 reads:

Theorem 2: Let $\tilde{\Delta}$ be the unique solution to the equation:

$$\frac{1}{2\pi} \sum_{k=0}^{N_0-1} \int_{\omega=-\pi}^{\pi} \left(\tilde{\Delta} - \left(\tilde{\lambda}_k(\omega) \right)^{-1} \right)^+ d\omega = N_0 \cdot \rho.$$

The capacity of the LPTV channel with ACGN (3) with power constraint (7) is given by

$$C_{LPTV-ACGN} = \frac{1}{4\pi N_0} \sum_{k=0}^{N_0-1} \int_{\omega=-\pi}^{\pi} \left(\log \left(\tilde{\Delta} \cdot \tilde{\lambda}_k(\omega) \right) \right)^+ d\omega.$$

Furthermore, the capacity-achieving input signal is a Gaussian zero-mean cyclostationary process.

Correspondingly, the equation above Equation (B.2) on page 1200 contains the same error, where ρ should be replaced with $N_0 \cdot \rho$.

The correct equation reads:

$$\frac{1}{2\pi} \sum_{k=0}^{N_0-1} \int_{\omega=-\pi}^{\pi} \left(\tilde{\Delta} - \left(\tilde{\lambda}_k(\omega) \right)^{-1} \right)^+ d\omega = N_0 \cdot \rho,$$

REFERENCES

- [1] N. Shlezinger and R. Dabora, “On the capacity of narrowband PLC channels,” *IEEE Trans. Commun.*, vol. 63, no. 4, pp. 1191–1201, Apr. 2015.

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The authors are with the Department of Electrical and Computer Engineering, Ben Gurion University, Beer-Sheva 8410501, Israel (e-mail: nirshl@post.bgu.ac.il).

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