

# Comments and Corrections

## Corrections to “A Discrete-Time Model for the Design of Type-II PLLs With Passive Sampled Loop Filters”

**T**HROUGH NO FAULT OF THE AUTHORS, several typesetting errors were made in the final production phase of [1]. Corrections of these errors are as follows:

1. Equation (2) should be:

$$F_{SLF}(z) = K \frac{(1 - \gamma_1 z^{-1})(1 - \gamma_2 z^{-1})(1 - \gamma_3 z^{-1})}{(1 - z^{-1})(1 - \beta_2 z^{-1})(1 - \beta_3 z^{-1})}$$

2. The sentence immediately following (4) should refer to  $T(e^{j\omega T_{\text{ref}}})$  instead of  $T(e^{j\omega T_{\text{ref}}})$ .
3. Equations (6)–(8) should refer to  $\phi_{pll}$  instead of  $\phi_{pll}$ .
4. The last term in (21) should be  $\phi_{\text{ref}}(\tau_n)$  instead of  $Q_{\text{ref}}(\tau_n)$ .
5. The left side of the second equation in Step 1 of Appendix A on Page 273 should be  $p_{2,\Gamma}$ .
6. In (32),  $\phi_{\text{ctrl}}(t_0 + \Delta t)$  should be:

$$\begin{aligned} \phi_{\text{ctrl}}(t_0 + \Delta t) = & r_{4,1}(\Delta t)q_T(t_0) + r_{4,2}(\Delta t)q_s(t_0) \\ & + r_{4,3}(\Delta t)q_x(t_0) + \phi_{\text{ctrl}}(t_0) \end{aligned}$$

7. In (47),  $K_\Gamma$  should be:

$$K_\Gamma = \frac{1}{(C_p(1 - \Gamma) + C_s + C_x)(p_{1,\Gamma} - p_{2,\Gamma})}$$

8. In (47), all instances of the exponential should be either  $e^{tp_{1,\Gamma}}$  or  $e^{tp_{2,\Gamma}}$ .
9. In (47), the first term in the expression for  $h_{4,3}(t)$  should be  $I_{x,s,\Gamma}t$ .
10. Equation (49) should be:

$$q_{p_A}(t_0) = [q_T(t_0) - q_s(t_0) - q_x(t_0)]\lambda$$

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$$q_{p_B}(t_0) = [q_T(t_0) - q_s(t_0) - q_x(t_0)](1 - \lambda)$$

11. The first equation in Step 5 of Appendix A on Page 274 should be:

$$\mathbf{A} = \mathbf{H}_{\text{op}}(t_{\text{op1}} + t_{\text{op2}})\mathbf{H}_{\text{el}}(t_{\text{cl}})$$

12. The first equation in Step 7 of Appendix A on Page 274 should be:

$$\mathbf{C}_i = [0 \ 0 \ 0 \ 1]\mathbf{D} \left( t_{\text{cl}} + t_{\text{op2}} + \frac{i-d}{L}T_{\text{ref}} \right)$$

13. The third equation in Step 7 of Appendix A on Page 274 should be:

$$d = \left\lfloor \frac{t_{\text{cl}} + t_{\text{op2}}}{T_{\text{ref}}} L \right\rfloor$$

14. In (51), the term after the first equal sign should be  $C_x V_x(s)$  instead of  $C_x V_x(x)$ .

15. Equation (54) should be:

$$h_3(t) = KC_x[(p_1 - p_2) + p_2 e^{p_1 t} + p_1 e^{p_2 t}]$$

16. Equation (55) should be:

$$r_{4,i}(\Delta t) = \frac{1}{C_x} \int_0^{\Delta t} r_{3,i}(\tau) d\tau$$

17. The word “Noble” should be capitalized in the last paragraph of the first column of Page 273.

## REFERENCES

- [1] K. J. Wang and I. Galton, “A discrete-time model for the design of type-II PLLs with passive sampled loop filters,” *IEEE Trans. Circuits Syst. I, Reg. Papers*, vol. 58, no. 2, pp. 264–275, Feb. 2011.