458 PROJECT MANAGEMENT AND SMART ELECTRICAL...

59(4), pp.229-233.

- [17] Roy, D.C., 2003. *Linear integrated circuits*. New Age International.
- [18] Rao, B.V., 2015. *Linear Integrated Circuits*. Pearson India.
- [19] López-Martín, A.J., Baswa, S., Ramirez-Angulo, J. and Carvajal, R.G., 2005. Low-voltage super class AB CMOS OTA cells with very high slew rate and power efficiency. *IEEE Journal of Solid-State Circuits*, 40(5), pp.1068-1077.
- [20] Szczepanski, S., Jakusz, J. and Schaumann, R., 1997. A linear fully balanced CMOS OTA for VHF filtering applications. *IEEE Transactions on Circuits and Systems II: Analog and Digital Signal Processing*, 44(3), pp.174-187.
- [21] Chi, M.H., Xiao, D. and Chang, R., Fast Development of IC Technologies in AI and IoT Era. In 2018 14th IEEE International Conference on Solid-State and Integrated Circuit Technology (ICSICT) (pp. 1-4). IEEE.
- [22] Mathew, S., Sheikh, F., Agarwal, A., Kounavis, M., Hsu, S., Kaul, H., Anders, M. and Krishnamurthy, R., 2010, June. 53Gbps native GF (2 4) 2 composite-field AES-encrypt/decrypt accelerator for content-protection in 45nm high-performance microprocessors. In 2010 Symposium on VLSI Circuits (pp. 169-170). IEEE.
- [23] Tokunaga, C. and Blaauw, D., 2009, February. Secure AES engine with a local switched-capacitor current equalizer. In 2009 IEEE International Solid-State Circuits Conference-Digest of Technical Papers (pp. 64-65). IEEE.
- [24] Satpathy, S., Mathew, S., Suresh, V. and Krishnamurthy, R., 2016, October. Ultra-low energy security circuits for IoT applications. In 2016 IEEE 34th International Conference on Computer Design (ICCD) (pp. 682-685). IEEE.

Chapter 25

ISBN: 9798587652200

SCADA AND SMART GRID CONTROL AUTOMATION

Prof.(Dr.) Sudhansu Kumar Samal Associate Professor and Head of the Department

Department of Electrical and Electronics (Centurion University of Technology and (Management, Bhubaneswar)

SCADA- Supervisory control and data acquisition is the method of getting the real time data like voltage, current, power consumption etc displayed over the screen. Controlling actions can be initiated by the SCADA itself from the computers. In turn the field devices connected shall take the trip output or circuit closing call etc.

Thus SCADA can display, protect and may be used for protecting the grid system automatically. Here automation due to SCADA plays a major role. Not only it reduces human intervention but also it makes the system more reliable, robust and efficient. This system can be used for protection and maintenance of the grid system.

The system can collect and store the real time data and these data may be used to forecast the faults. The characteristics of various systems can be observed, plotted and analyzed for the improvement of the reliability of the grid system.