DAFTAR PUSTAKA

[1] Gemihato. Ilham, *Teknologi 4G-LTE dan Tantangan Konvergensi Media di Indonesia*, Jurnal Kajian Komunikasi, Vol. 3, No. 2, hlm. 212-220, Desember 2015.

[2] Arshad. Qazi Kamal U. D. A, dkk., *A Review on the Evolution of Cellular Technologies,* International Bhurban Conference on Applied Sciences and Technology, hlm. 989-993, 2019.

[3] Peraturan Menteri Komunikasi dan Informatika Republik Indonesia No. 27 Tahun 2015 tentang Persyaratan Teknis Alat dan atau Perangkat-perangkat Telekomunikasi Berbasis Standar Teknologi Long Term Evolution, Jakarta: Menkominfo.

[4] Balanis. Constantine A, *Antenna Theory Analysis and Design, Third Edition*, Wiley-Interscience, United States of America, 2005.

[5] Garg. R., dkk., *Mikrostrip Antenna Design Handbook,* Artech House Inc, London, 2001.

[6] Filho. Valdez A. A., dkk., *Performance Optimization of Microstrip Antenna Array Using Frequency Selective Surfaces,* Jurnal of Microwave, Optoelectronics and Electromagnetic Applications, Vol. 13, No. 1, hlm. 31-46, Juni 2014.

[7] Pratama. Febrian Akbar, *Perancangan dan Simulasi Antena Microstrip Circular Multilayer untuk Aplikasi Antena 4G LTE pada Pita Frekuensi 2300 MHz (Band 40),* Tugas Akhir, Teknik Elektro FT UNAND, 2017.

[8] P. Ravikumar, D. A. Kumar, and P. Devipradeep, *Gain and Bandwidth Enhancement of a Circular Microstrip Patch Antenna Using an Air Layer*

between Two Substrates, Int. Conf. Electr. Electron. Signals, Commun. Optim. EESCO, hlm. 2–5, 2015.

[9] Edward. Ganesta L., *Bandwidth Enhancement dengan Penambahan Shorting Pin pada Antena Mikrostrip Patch Circular untuk Aplikasi LTE pada Band 40*, Tugas Akhir, Teknik Elektro FT UNAND, 2018.

[10] Nurmantris. Dwi Andi, dkk., *Pattern Reconfigurable Patch Antenna menggunakan Edge Shorting Pin dan Symmetrical Control Pin*, Jurnal ELKOMIKA, Vol. 3, No. 2, 2015.

[11] Budi. Imam. M. P., dkk., *Perancangan dan Analisis Antena Mikrostrip MIMO Circular pada Frekuensi 2,35 GHz untuk Aplikasi LTE*, Jurnal Infotel, Vol. 9, No. 1, Februari 2017.

[12] Guha. Debatosh, dkk., *Circular Microstrip Patch Loaded With Balanced Shorting Pins for Improved Bandwith*, IEEE Antennas and Wireless Propagation Letters, Vol. 5, hlm. 217 – 219, 2006.

[13] Miligan. Thomas. A., *Modern Antenna Design Second Edition*. Amerika: Wiley–Interscience, 2005.

[14] Pramono. Subuh, *Analisa Empiris Voltage Standing Wave Ratio (VSWR) dan Distance to Fault (DTF) pada Feeder Base Transveiver Station GSM 900 MHz*, JTET, Vol. 3, No. 3, hlm. 149 – 153, Desember 2014.

[15] Alsager. Ahmed Fatthi, *Design and Analysis of Microstrip Patch Antenna Arrays*. Master Thesis, Swedia: University of Boras, 2011.

[16] Nakar. Punit. S., *Design of a Compact Microstrip Patch Antenna for Use in Wireless/Cellular Devices.* Electronic Theses Treatises and Dissertations, Florida State University Libraries, 2004.

[17] Putra. Rico Bernando, dkk., *Perancangan Antena Mikrostrip Segiempat Peripheral Slit untuk Aplikasi 2,4 GHz dengan Metode Pencatuan Proximity Coupled*, JNTE, Vol. 7, No. 1, 2018.

[18] T. Firmansyah, dkk., *Peningkatan Bandwidth Antena Mikrostrip Lingkaran Menggunakan Metode Beleved Half Cut*, Seminar Nasional Inovasi dan Aplikasi Teknologi di Industri, 2017.

[19] L. G. Maloratsky, *Microstrip Circuit with a Modified Ground Plane*, Summit Technical Media, 2009.

[20] Fong. Lee Kai, dan Chair Ricky (Eds.), *On The Use of Shorting Pins in the Design of Microstrip Patch Antennas*, Taylor and Francis Publisher, Australia, 2014.

[21] C.L. Tang, dkk., *Small Circular Microstrip Antenna with Dual Frequency Operation*, Vol. 33, No. 73, 1997.

[22] R. Waterhouse, *Microstrip Patch Antennas: A Designer's Guide*, RMIT University, hlm. 197-277, 2003.

[23] W. Jia, *Enlightenment from the Innovative Application of 4G Communication Technology in the Mobile Library*, *International Conference on Smart City and Systems Engineering*, No. 3, hlm. 153–156, 2016.

[24] Setiabudi. D., dan Bayu H. W., *Rancang Bangun Antena Helix Mode Axial dan Patch Meanderline DGS untuk Aplikasi LPWAN Berbasis IoT pada Daerah Rural*, Jurnal Rekayasa Elektrikal, Vol. 14, No. 2, hlm. 105-115, Agustus 2018.

[25] Keith. C. H., *Microstrip Antennas: Broadband Radiation Pattern Using Photonic Crystal Substrate*. Master Thesis, Virginia: Virginia Polytechnic Institute and State University, 2002.

[26] Ansoft Corporation, *User's Guide – High Frequency Structure Simulator*, Pittsburgh: Ansoft Corporation, 2005.