

Analisis Penerapan RAN Sharing (MOCN) dan Regulasinya di Daerah Banyumas = Case Study Of Multi Operator Core Network RAN Sharing And Regulation In Banyumas

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Abstrak

Berdasarkan studi yang dilakukan International Telecommunication Union ITU pada tahun 1990-an menyebutkan bahwa 1 kenaikan teledensity, memberikankontribusi sebesar 3 pada pertumbuhan GNP Gross National Product. Olehkarena itu, pemanfaatan spektrum frekuensi radio yang tidak efisien akan menimbulkan efek berganda pula, yang mengakibatkan 'inefisiensi' pembangunan secara keseluruhan[14]. Salah satu solusi teknologi yang memungkinkan efisiensi infrastruktur adalah dengan Radio Access Networksharing yang bersifat aktif yaitu MOCN Multi Operator Core Network yang dapat melakukan sharing terhadap perangkat dan juga frekuensi kerja antar operator.

Berdasarkan keadaan tersebut, terdapat pertentangan dalam regulasi pendayagunaan sumberdaya frekuensi, sehingga dirasa perlu adanya penyesuaian peraturan dari pemerintah agar dapat terlaksana penyelenggaraan RAN Sharing yang bersifat saling menguntungkan baik pihak operator, pelanggan, dan regulator. Analisis pemenuhan kebutuhan pelanggan LTE dan pemenuhancakupan area layanan dilakukan di daerah Banyumas, Jawa Tengah, Indonesia dengan memperhitungkan nilai capex dan opex yang akan diinvestasikan. Analisis dilakukan di daerah Banyumas, Jawa Tengah, Indonesia dikarenakan salah satu operator seluler indonesia menerapkan RAN sharing MORAN Multi Operator Radio Access Network di daerah tersebut. Hasil dari analisis penerapan RAN sharing MOCN dapat menghasilkan keuntungan dua kali lebih besar dibandingkan penerapan Own Build.

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Studies that have been conducted by the International Telecommunication Union ITU in the 1990s mentioned that a 1 increase in teledensity, contributed 3 to the growth of GNP Gross National Product . Therefore, the inefficient use of radio frequency spectrum will cause multiple effects as well, which resulted in the inefficiency of overall development. One of the technology solutions that enable efficient infrastructure is an active sharing Radio Access Network, namely MOCN Multi Operator Core Network which can share towards devices and also working frequency between operators.

Based on these circumstances, it is deemed necessary for adjustments of the regulations from the government in order to implement the RAN Sharing, which will mutually beneficial for both the customers, operators, and regulators. Analysis of fulfilling LTE subscriber needs and area coverage carried out in Banyumas, Central Java, Indonesia with taking into account the value of to be invested capex and opex that can be used as a driving factor to improve the government regulations on the arrangement of frequencies so RAN sharing can be applied in Indonesia. The analysis was carried out in Banyumas, Central Java, Indonesia because one of the Indonesian mobile operator implement RAN Sharing MORAN Multi Operator Radio Access Network in the area. The results of the analysis of the implementation of RAN sharing MOCN can generate profits two times greater than the implementation of Own Build.