

Perancangan simulator dan analisis threshold kapasitas untuk keputusan ekspansi BTS di PT XYZ menggunakan probabilistic risk analysis discrete random variables = Simulator design and analysis of capacity threshold for BTS expansion decision in PT XYZ using probabilistic risk analysis discrete random variables

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Abstrak

[ABSTRAK

Saat ini operator telekomunikasi menghadapi berbagai tantangan yang mempengaruhi profit. Untuk menghadapi tantangan ? tantangan tersebut operator memerlukan strategi yang tepat. Strategi kepemimpinan biaya dapat direalisasikan dalam efisiensi capex dan opex. Penelitian ini bertujuan untuk melakukan efisiensi penggunaan biaya investasi BTS tanpa mengesampingkan kualitas layanan. Untuk tercapainya laba bersih yang diharapkan, dibutuhkan perancangan ambang batas kapasitas sebagai pedoman ekspansi BTS. Investasi yang berlebihan dapat menyebabkan penurunan laba bersih. Sebaliknya investasi yang terlambat dapat menyebabkan rendahnya Quality of Experience (QoE). Perhitungan ambang batas menggunakan teori Probabilistic Risk Analysis Discrete Random Variables, dengan membandingkan probabilitas tingkat pengembalian investasi dan risiko antar alternatif agregasi utilisasi menggunakan mean 80%, mean 90%, peak 80%, dan peak 90%. Hasil analisis menunjukkan berdasarkan analisis probabilitas tingkat pengembalian investasi dan tingkat risiko, maka agregasi mean dengan threshold 90% lebih baik.

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ABSTRACT

Nowadays, the operators have faced some challenges which impact to net profit. To overcome the challenges, operators need proper strategy. Cost leadership strategy can be realized in efficient capex and opex. This research is purposed to make BTS investment cost efficient without set the quality of service aside. To get the expected profit, operators need to design the capacity threshold as BTS expansion guidance. Over investment can cause net profit decrement. Otherwise, late investment can cause low Quality of Experience (QoE). Threshold design uses Probabilistic Risk Analysis Discrete Random Variables theory, with comparing return of investment probability and risk between alternatives using mean 80%, mean 90%, peak 80%, dan peak 90%. The result shows that base on return of investment probability and risk, mean aggregate with threshold 90% is better than others; Nowadays, the operators have faced some challenges which impact to net profit. To overcome the challenges, operators need proper strategy. Cost

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