

# Perancangan model kontrol investasi dan threshold kapasitas SGSN menggunakan probabilistic risk analysis continuous random variables = Design of investment model and threshold for SGSN capacity expansion using probabilistic risk analysis continuous random variables

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Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20403422&lokasi=lokal>

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## Abstrak

[<b>ABSTRAK</b><br>

Kinerja keuangan operator X mengalami penurunan di sisi net profitnya, dan menunjukkan cost atau beban usaha yang meningkat di tiap tahunnya sehingga mengurangi pendapatan revenue perusahaan. Untuk meningkatkan profit perusahaan yang paling mungkin untuk dilakukan pada kondisi industri telekomunikasi saat ini yang merupakan pasar oligopoly, adalah perlunya efisiensi di sisi cost, yaitu dalam hal ini adalah investasi perusahaan. Trafik data berkembang semakin pesat belakangan ini, mempengaruhi kebutuhan akan jaringan data. Sehingga untuk memenuhi kebutuhan ini diperlukan adanya ekspansi kapasitas, dalam hal ini kapasitas SGSN (Serving GPRS Support Node). Perancangan model kontrol untuk investasi dan threshold atau ambang batas disini akan menjadi kunci dalam pengambilan keputusan berapa besar dan waktu yang tepat untuk melakukan ekspansi. Sehingga menjamin tidak terjadinya over investment (investasi berlebihan), serta menghindari terjadinya keterlambatan ekspansi yang dapat menyebabkan hilangnya pasar potensial.

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The financial performance of operator X, has decreased especially in term of net profit and shows that costs or operating expenses increased each year and therefore reducing company's revenue earnings. To increase company's earnings in Olygopoly market, efficiency cost need to be maintained, in this case company's investment. Data traffic is growing more rapidly these days, affecting the need of network capacities for data traffic. Therefore to meet the requirements, it is necessary to expand the capacity, and in this case the capacity of the SGSN (Serving GPRS Support Node). Design control model of investment and threshold are needed in decision making on how much the capacity will be added and when the proper time to expand the capacity. Therefore, it avoid over investment and to be sure the proper time to expand the capacity so the company does not losing their potential market.;The financial performance of operator X, has decreased especially in term of net profit and shows that costs or operating expenses increased each year and therefore reducing company's revenue earnings. To increase company's earnings in Olygopoly market, efficiency cost need to be maintained, in this case

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