

## ABSTRACT

*Business Simulation is an activity that discuss about how to simulate a complex business system in the real world. In realization, business simulation involves the use of computer software (business game application) in many times. Business game application used by the institution of higher education as the education media tutoring student to make financial decision on real circumstances by a simulation. Meanwhile, some companies use it as a tool in their recruitment. Business Game application can be used as promotion media by the institution, with Business Game competition.*

*This research is develop the telecommunication business system model in Indonesia using artificial neural network. The involved attributes in this research is tariff, number of BTS, workload, total activa, and market share. The function that describe the effect of tariff, number of BTS, workload, and total activa towards to market share is:*

$$y = [(z1 * n1) + (z2 * n2) + (z3 * n3) + (z4 * n4) + (z5 * n5) + (z6 * n6) + (z7 * n7) + (z8 * n8) + b2]$$

*explanation:*

*y = market share*

*b = refraction*

*n = weight*

*z = neuron in hidden*

*layer*

*That function and winning determiner parameters, which is ROI, clarify the strategy to win the competition, which is by increasing the revenue, and decreasing the workload and activa value.*

*The conclusion of this research is business game application is documented for further research development purpose. The designed system has advantages in application and feasibility aspect as compared to the existing system. The advantage on application aspect is that the system gives options for users to control the cashflow by choosing the return of bank loan method, by setting the depreciation of fixed assets, and by calculating the demand forecasting using macro economy method. The advantage on feasibility aspect is that the system is capable to handle more users, more practical to use, and has more promotion value for Telkom Institute of Technology.*

*Keywords: business game application, structured analysis and design, telecommunication business system model, artificial neural network.*