

## ***Abstract***

*SMS Banking is a service provided by the Bank to its clients to support the smooth process of the Bank's business. Both sides between the Customer and the Bank mutually benefited by the SMS Banking facility. Several Bank Indonesia, especially in pursuit of targets to encourage consumers to SMS Banking or SMS Banking facility users continues to increase.*

*Associated with the facility it is very closely related to SMS Banking with banking transactions related to the nominal money. Transactions provided by the Bank via SMS Banking is very diverse ranging from the Transfer, Sale and purchase of goods, airfare Pay, Pay Electricity Account, and others.*

*Through the convenience provided by the SMS Banking is not entirely supported by the security aspect. One was the communication from the client to the Telecommunications Operator is not supported by strong security. In fact there are states that support the security of the GSM A5 and A8 have been solved[2][3]. Therefore, this study was made to complete the security aspects of Data Confidentiality (encryption SMS) to SMS Banking using Elgamal algorithm.*

*The results of this study is the high security aspect of the support obtained from the SMS encryption. Therefore, the Elgamal algorithm suitable to be applied on a system that was built when viewed from the encryption of messages on the Mobile Device is not consuming large memory resources (memory <2 KB) and the long short execution time ( $t < 0,14$  seconds).*