Unsecured information travelling over the network from a source to an intended destination are very vulnerable to cyber attacks. Millions of information have been hijacked and stolen across the globe within the last few years, translating to several millions of Dollars in damages. This paper is on the improvement of the security of existing systems that are mainly encryption systems implementing algorithms such as the Advance Encryption Standard (AES), Rivest Shamir and Addleman (RSA) encryption algorithm, without an active alert system for users. This is by designing and implementing an enhanced Advanced Encryption Standard file encryption model to secure and track information on transition. The implementation was achieved by codifying a Timing Circuit Algorithm (TCA) and Feedback Artificial Agent (FAA) into an Advance Encryption Standard algorithm to control decryption and monitor data along the transition path. Information encrypted with this system cannot be decrypted until the due date and time specified, the monitoring agent also sends reports of decryption to administrator's e-mail address and phone number. The model was implemented with Java programming language; the system achieved the desired results when tested.