This work presents the development of a distributed security management system for telecommunication networks. The system consists in reducing the use of cloned mobile telephones (same both number and series of a genuine phone a perfect copy) using three main techniques. (1) An ISO Formal Technique (LOTOS) is used to specify and validate the system through the Eucalyptus software employment. The validation process includes exhaustive and interactive simulations, testing and verifications in order to guarantee the correctness of the system. (2) A pattern recognition technique is used to classify the telephone users into classes. From this classification it is easier to identify if a call does not correspond to the patterns of a specific user, and thus identify whether a nongenuine caller made the call. MatLab software was employed to implement the classification algorithms. (3) A distributed object technique is used for the implementation of this distributed system (i.e., manager and agents), with CORBA support, considering TMN and ATM technologies, by VisiBroker and JDK software employment.

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