levels would be very difficult to accomplish manually.

Other advantages of the system are that it models real-world scenarios where experience and good behavior are rewarded with higher privileges, whereas novices and unreliable entities are only given limited rights. Furthermore, the system is decentralized and prevents a single node from damaging the reputation of others. It also keeps historical records of every node’s behavior, making it easy for system administrators to monitor their behavior and promote or demote a node’s role.

We evaluated the performance of a particular implementation of HTMS on a simulated network, using our previously proposed SVM-based RS [22]. We determined the ideal response that the system should have and compared the actual response with the ideal as a benchmark. The results show that the actual response is very close to the ideal response if the percentages of malicious nodes in the training and test sets are the same. Since we do not know this percentage in an actual network, we recommended using sampling to estimate this percentage and then using this estimate to determine which SVM model to use for generating maximum accuracy. Even if the estimate is not accurate, HTMS still performs better than just RBTM by itself, since RBTM would simply allow maximum privileges to the node all the time.