

Graduate School of Science and Technology Master's Thesis Abstract

Laboratory name (Supervisor)	Cyber Resilience (Youki Kadobayashi (Professor))		
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Thesis title	An Iterative Approach for Prototyping a Botnet-Simulation Strategy Game for Teaching 教育用ボットネットシミュレーション戦略ゲーム試作のための反復的なアプローチ		
Abstract			
A bot is a program designed to execute predefined operations repeatedly and automatically. A large pool of hosts running bot programs forms a network called a botnet which runs under the command of the botmaster. Several existing games focus on training players in cyber security concepts such as user awareness and hacking. However, there isn't a game for every existing cyber security field, much less if we talk about botnets. Through a strategy simulation game it is possible to simplify the understanding of botnets transforming it into a seamless experience. In this project, we propose four different approaches to create a strategy simulation computer game to facilitate cyber security basics learning. By iterating over the game creation process it is possible to compare the feasibility of each prototype and determine which game type suits our needs the best. If we can successfully develop a fully functional prototype, not only we could assess the perceived game quality by employing an existing model but also measure the learning outcome after one or more play testing sessions.			