

Cyberciege and interactive environment

[Environment](#), [Ecology](#)



CyberCIEGE is a video game configured to train users in an interactive environment which covers significant aspects of network management and information security in an organization, defense departments and even in governmental institutions. It involves the configuration of the work stations, servers, operating systems and network devices (Irvine and Thomson, 2006). The game scenarios involve the making of prioritization decisions and struggling to match a balance between the limited budget, productivity and information assurance and security.

The user (player) advances through a series of stages while also protecting the organization's assets like information against the constant and escalating attacks. It is a cyber security training awareness through video game playing. This system is tailored to address the organization's policies and requirements (Irvine and Thomson, 2006). After installation of the software, the video game was played for one hour, while taking the role of the system administrator in a governmental institution.

The main role was to oversee the physical and electronic security in the organization. However, the role was very challenging as the game scenarios could only allow working with a limited budget of a third the ideal budget and the office being under constant and escalating attacks by hackers and foreign intelligence agents in the world. On the other hand, the scenario could not allow the user to get help from the co-workers while the human resource department could not hire any other worker apart from those working with other foreign intelligence agencies.

The scenario was more challenging as every decision made resulted in consequences that could affect the organization. It was therefore imperative to make the right and intelligent decisions in this scenario. The success of the user (system administrator) was measured on the reflection of how the organization was doing. A metric of dollars was used and the user (system administrator) could query the thoughts of individuals and view the levels of happiness, complains and even wishes of the users.

After the gaming, the system could debrief the user on the choices that were made. The system also criticized some of the choices made. The gaming also involved a simulated system where there were un-ending worst cases scenarios where the software or the hardware had flaws, escalating and challenging attacks, the budget was also too small and hence the user could not please everyone including the co-workers. In this scenario, the activity engaged in was playing the role of the system administrator.

There were a number of lessons learnt from this video game, moreover the game is a teaching tool for students and staff in governmental institution and defense departments it enables one to understand the consequences of his/her decisions in the organization. On the other hand the game scenarios also provided a list of the goals and objectives of the organization that the user should be able to meet otherwise the organization's success could be in vain. This simulated system enables the user to make right and intelligent decisions in the real world environment without risking the decision making.

It also enables the staff to make decisions with confidence on the consequences of his/her decisions. Cyberciege is a significantly useful tool

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for individuals working with computers in organizations which it trains the user not to overlook or assume aspects no matter how small they are because they could have significant impact on the organization. It also trains the user to fulfill and to meet organizations information security and information assurance. The system engages the users in a very challenging information assurance and security adventures,

Conclusion Cyberciege is an important tool in training students and staff on the management of information and security. It also enables the user to make intelligent decisions in an organization; the user success is a reflection on how the organization is performing. Cyberciege is a high-end commercial quality video game developed for the purposes of information security assurance and other researches.

Reference:

- 1. Irvine, C. E. and Thomson, M. F. (2006). CyberCIEGE: Gaming for Information Assurance. California. Naval Postgraduate School.