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Development of cyber incident exercise for communication management in critical infrastructure

Shiho Taniuchi, Yuitaka Ota and **Ichiro Koshijima**
Nagoya Institute of Technology, Japan

In recent years, however, cyber-attacks have become a real threat and have rendered critical infrastructure (CI) uncertain and unsafe through industrial control systems (ICSs). Consequently, CI owners need to prepare countermeasures to ensure the safety and security of ICSs. Countermeasures must be developed to flexibly cope with a crisis and quickly recover to a safer state are required. However, responding to situations without experience and developing adequate countermeasures is a difficult challenge. So, it is effective to experience the cyber incident response through desktop exercises that simulate cyber incidents, and to store experience values. Cyber incident response needs response planning and communication management. Until now, an author has developed a tabletop exercise to simulate an incident response process and communication. However, desktop exercises were overlooking the importance of communication. So, there is a need for exercises to think about effective communication during the cyber incident response. The newly developed exercise show the response of cyber-attack targeted at ICS with cards and has a mechanism that can be thought about communication management. The exercise was conducted at the workshop of Nagoya Institute of Technology and at "Industrial Cyber Security Center of Excellence" established by Ministry of Economy, Trade and Industry of Japan.

27117053@ste.nitech.ac.jp