Theme: Security & Privacy

- Sub Theme: Automatic S/W Vulnerability Detection and Patch Generation

S/W vulnerabilities are the weakness which can be exploited by a threat actor, such as an attacker, to perform unauthorized actions within a computer system. There are various approaches to detecting vulnerabilities, but automated detection with high accuracy and recall remains a difficult problem. In addition, technologies to automatically generate patches for vulnerabilities found are in the early stages.

We are looking forward to finding a method to find software vulnerabilities automatically while maintaining false positives and false negatives as low as possible. If the method is capable of providing the patch caused by the vulnerability, it would be a perfect automated solution against software vulnerabilities.

The topics we pursue through this GRO are as follows:

- Technology that detects known or unknown vulnerabilities from source code or binary while keeping low false positives and false negatives enough to be automated solution (w/o human review).

- Technology that provides corresponding patches when finding software vulnerabilities.

※ The topics are not limited to the above examples and the participants are encouraged to propose original idea.

※ Funding: Up to USD $200,000 per year