

## Hearts United Group Establishes Business Alliance with HEROZ, Leading Company in AI

Hearts United Group Co., Ltd. (hereinafter referred to as “Hearts United Group”) is pleased to announce that it has entered into a business alliance agreement for using artificial intelligence (AI) in software verification work with HEROZ, Inc. (hereinafter referred to as “HEROZ”), which plans, develops and operates internet services using AI technology.

Our group’s core business is to provide “debugging services” that identify software defects from the users’ perspective. We have been accumulating experience in detecting bugs for over 15 years, and 1.1 million bugs have been detected since its inception.

In expectation of expanding our business in various fields, we have been conducting research on developing a unique AI-based approach and putting it into practical use by utilizing our bug data and accumulated debugging know-how.

As a result of the research, advanced AI technology is expected to bring further positive impact in the fields highly compatible with AI and use of AI will be further accelerated in the near future. Thus, Hearts United Group concluded a business alliance agreement with HEROZ for using AI in software verification work.

HEROZ has been engaging in use of AI in the entertainment industry by developing online match strategy games, such as “Shogi Wars,” and by collaborating with game developers. In fact, it has developed AI that defeated professional shogi (Japanese chess) players in a public match for the first time ever. As for the FinTech field, HEROZ recently developed a stock price prediction system jointly with financial institutions. The company has an advantage on implementing AI, based on the characteristics of each industry through using technologies such as machine learning including deep learning.

It is aimed that, with HEROZ’ expertise, AI will automatically perform website analysis and generate a testing process that are necessary for conducting tests, through learning the test methods we acquired. While our business domain varies across industries, web/business application software (including software used on smartphones) which has less user operation are assumed as our target.

We will put AI technology into practical use by combining technology and knowledge of both our group and HEROZ through this business alliance and aim to carry out service quality enhancement, effective operations and new service development.

Furthermore, we will lead the software quality enhancement in Japan and overseas and support high-quality product development of our clients by using the best AI technology based on their operation processes and service structure.

[HEROZ, Inc.]

HEROZ, Inc. (“HEROZ”) engages in planning, developing and operating services using AI technology, with the aim of “creating services that amaze the world” under the concept of “Heart filled with amazement.” HEROZ had made an AI-used approach, its core, unique approach technology, including machine learnings that have been

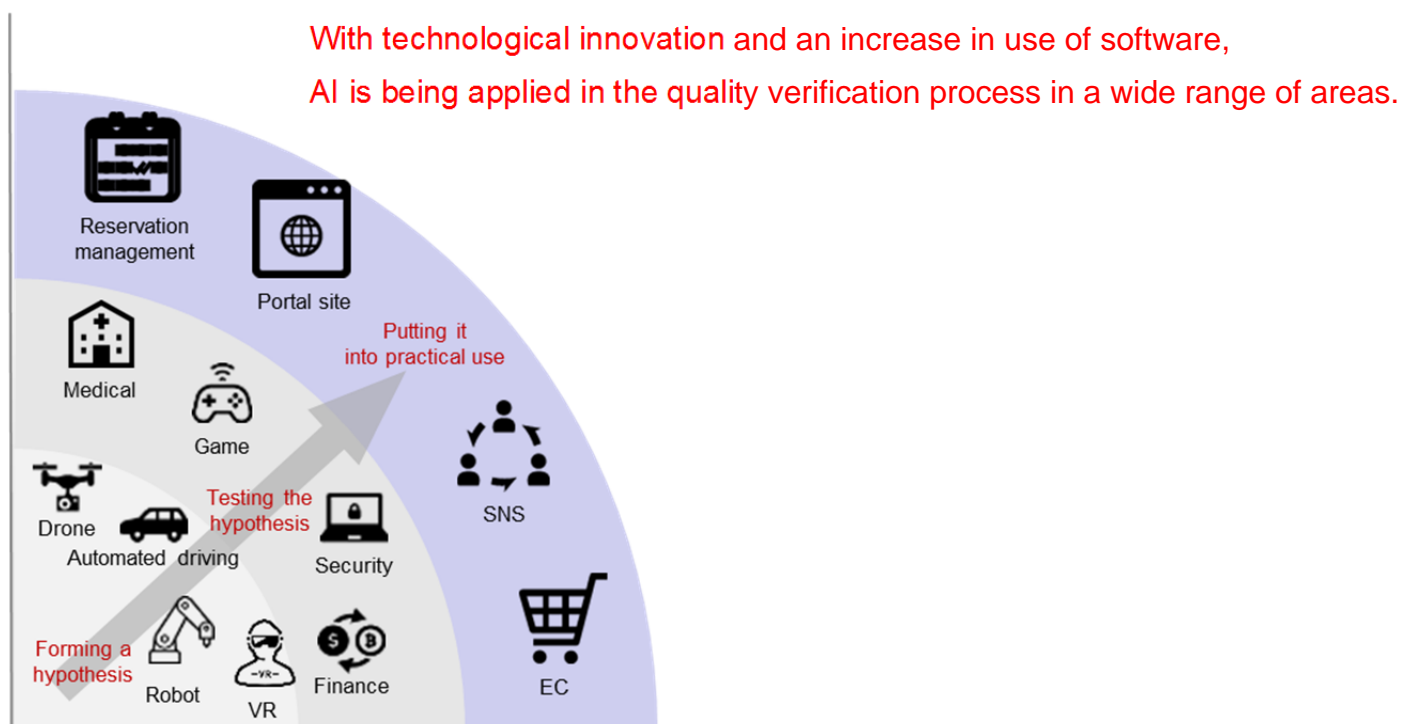
developed in the process of the development of “Shogi Wars,” “CHESS HEROZ” and “BackgammonAce,” and HEROZ’s top engineers, including those who had developed shogi AI that defeated professional shogi (Japanese chess) players in public matches, engage in everyday development work. HEROZ puts an effort in research on AI on a company-wide basis, and three of its AI researchers have experience in competing with a computer shogi software program in the Shogi Denou Tournament and two of the three have developed AI that became the champion of the Computer Shogi Championship. The company is also dedicated to keeping up with the trend of the cutting-edge AI technology as a supporting member of “The Japanese Society for Artificial Intelligence,” considering AI technology as a strategically important field.

HEROZ aims to make a paradigm shift in each industry by promoting AI revolution through actively and continuously carrying out technological development, providing services and conducting collaboration activities, with focus mainly on “AI application in the mobile field.”

#### [Use of AI in Web service system verification]

With the diffusion of the internet, smartphones and electronic transactions, Web services provided through the internet have been getting complicated and diversified. As a result, corporate websites and EC sites are becoming huge with tens of thousands of pages and defect occurrence risks are increasing. Under the situations, quality enhancement of the websites and risk management are getting more important. Meanwhile, as for use of automated tools in Web service system verification, it is difficult to choose appropriate tools and to acquire knowledge required for the generation of scripts used to perform work procedures. Furthermore, demands for outsourcing visual checks are increasing in the area of Web service system verification because it is not easy to secure personnel and conduct the checks with the same level of accuracy.

Combining our debugging knowledge and HEROZ’s AI technology through this business alliance, we will establish a competitive advantage on our services in a short term with optimal workforce deployment by improving knowledge acquisition, efficient operations and accuracy enhancement, which remain unsolved issues when using automated tools and conducting verification through visual checks.



\* The names of the respective companies and their services and products are the trademarks or registered trademarks of the companies concerned.

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[Profile of Hearts United Group Co., Ltd.]

Hearts United Group URL	: <a href="http://www.heartsunitedgroup.co.jp/">http://www.heartsunitedgroup.co.jp/</a>
Date Established	: October 1, 2013
President & CEO	: Eiichi Miyazawa
Headquarters	: 6-10-1 Roppongi, Minato-ku, Tokyo
Business activities of the group companies	: Debugging business, media business, creative business and other businesses