

PASCO Wins First Prize in Satellite Image Recognition Competition



The PASCO Corporation, a company that processes and analyses geospatial information for solving social problems (especially using Earth Observation satellites), has won the DeepGlobe Satellite Challenge, an international competition which was held at the IEEE Conference on Computer Vision and Pattern Recognition 2018, an academic conference in computer vision research, held 18-22 June in Salt Lake City, Utah, USA.

PASCO's Satellite Business Division won the 'Building Detection' challenge (comprised of 389 teams) by achieving the highest accuracy satellite imagery interpretation utilising the company's proprietary AI/Machine learning technology (deep learning technology).

Other competitions included 'Road Extraction' (454 teams) and Land Cover Classification (400 teams). Nearly 1,000 papers were published from all over the world, and over 5,000 people participated.

Challenge Summary

Many previous studies were considered insufficient about how to address a wide variation of building sizes, and how to efficiently incorporate this with context information such as roads. PASCO proposed a multitask model that can handle different sized buildings appropriately by using specialised detectors for each building size. In addition, the model implicitly utilises context information by simultaneously training road extraction tasks along with building detection tasks. The experiment showed that the proposed model can greatly improve the detection accuracy of the building.

PASCO won the challenge with the method of handling buildings which is patent applied according to size, and such an approach was not found among the methods of the other participants.

Utilisation of Results

PASCO will utilise this result for building change interpretations to improve the quality of services they offer to solve society's problems, and also for the company's internal productivity.

For more information on the Challenge visit <http://deepglobe.org/leaderboard.html>

For more information on PASCO visit www.pasco.co.jp/eng