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RTRI Launched Image Analysis and IT Laboratory

On December 1, 2017, Image Analysis and IT Laboratory was launched as a new laboratory in the Signalling and Transport Information Technology Division of RTRI.

RTRI will promote the research and development regarding information technologies, specifically, image analysis technologies, big data analysis and deep learning, in order to meet the needs of railway operators more quickly and to propose new technologies of these fields. For these purposes, a new laboratory "Image Analysis and IT" was set up in Signalling and Transport Information Technology Division. RTRI will actively utilize image-processing technologies and IT that the researchers have already accumulated and used in different technical fields.

This laboratory will seek to apply image analysis technologies to constant condition-monitoring for railway facilities and train driving safety and to use IT in maintenance and operation control.

At the inauguration of this laboratory RTRI's president Dr. Kumagai expressed his expectations for the new members, and Dr. Masato Ukai, the head of the laboratory, also expressed his wishes.

President Kumagai's statement

There are two purposes for the newly-established Image Analysis and IT Laboratory. First one is to quickly and actively implement the research into IT for railways utilizing the expertise of different fields of researchers. For this purpose, the members of the new laboratory have been chosen from among every research field at RTRI. In order to introduce IT to railway operations, high-performance low-cost systems need to be established. I hope that the researchers will integrate their research results and expertise and that synergy will be generated. The second purpose is to create a place where the researchers interested in image-related technologies and IT and hoping to get involved will be able to have discussions openly and freely and to absorb scientific knowledge. Every researchers active involvement is highly anticipated.

Greetings from Dr. Ukai, Laboratory Head of Image Analysis and IT Laboratory

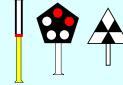
The Image Analysis and IT Laboratory is unique in that researchers from different research fields have gathered here. It is essential to make the best use of RTRI's technical resources in order to generate effective results as early as possible. Now, its stage has been set. By sharing the expertise of each researcher, I believe we will be able to have synergy effects that is impossible without sharing and cooperation. We might have to start without a chart, but we will keep close communication among the members and dedicate our efforts in order to create innovative results.

Image Analysis and IT Laboratory is launched with Laboratory Head and 12 researchers.

Image analysis technology and IT for railways



Intelligent CCTV camera



Signal recognition to support driving

Efficient maintenance and operation control using IT





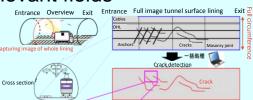
Drowsiness evaluation with image analysis

Application of image analysis technology to condition monitoring, driving support and other relevant fields

R&D of Image
Analysis and IT
Laboratory



Storing and analyzing big data of railway systems





Detection of cracks on tunnel surface using AI



Detection of objects on tracks using



President Kumagai (second left, front row) and the team of the new laboratory

Signalling and Transport Information Technology Division

Signalling Systems

Train Control Systems

Telecommunications and Networking

Transport Operation Systems

Transport Planning and Marketing

New Laboratory launched on December 1, 2017



Signalling Systems

Train Control Systems

Telecommunications and Networking

Image Analysis and IT

Transport Operation Systems

Transport Planning and Marketing