CTI Engineering International Co., Ltd.

Data Management & analysis Technology using tablet

database system for road disaster prevention using the tablet (iPad)

Hazard

Land Slide Avalanche

Solution Purpose

Prevention & Mitigation

Solution Theme

Research & Investigation Risk Assessment Disaster Prevention Plan Infrastructure Technology Information & Communication Technology

Technology Subject

Site Investigation Risk Monitoring Mitigation Plan Road Information Analysis & Judgement

Advantages

Development of this technology has enabled the department to continuously manage and update information on road disasters and to establish the road disaster management plan based on the information.

Solution Illustrated

This is a database system for road disaster prevention using the tablet (iPad), and its main functions are inspections for disaster prevention and analysis of data collected at disaster risk points. The six (6) types of disasters targeted are Rockfall, Bedrock Collapse, Slope Collapse, Landslide, Debris Flow, Avalanche, Snow Drifting and Riverbank Erosion.

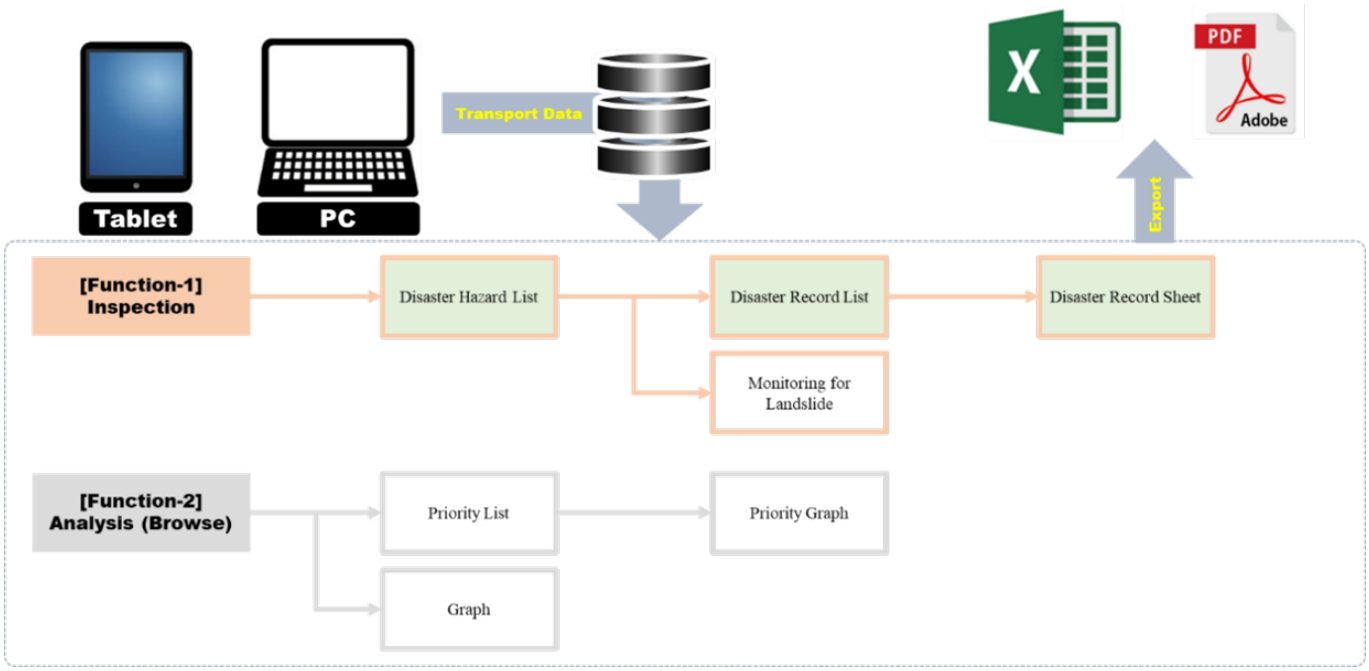

Figure: Outline of the System

Background

In this database system, inspections for disaster prevention are conducted, diagnosed, and recorded by road administrators, and various data are stored in the database. Using the data accumulated in the database, the road administrators formulate the road disaster management plan and implements countermeasures in accordance with the plan.

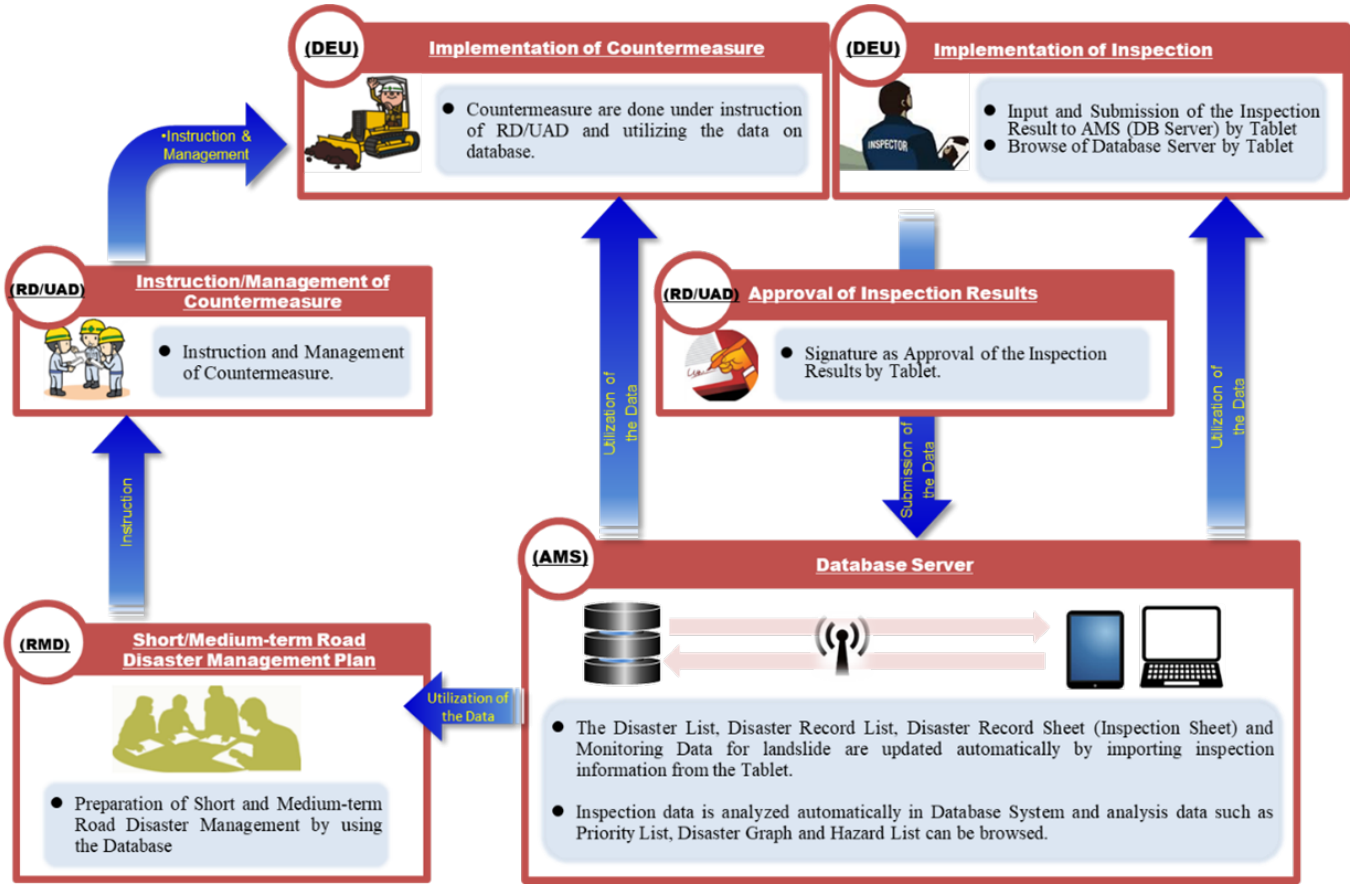

Figure: Operation Flow of the System

Exposition of the Solution

Although road disasters (rockfalls, slope failures, etc.) occur frequently on several roads such as national roads and provincial roads in developing countries, sufficient and adequate countermeasures have not been often implemented. The main causes are insufficient budget and undevelopment of countermeasure plan based on disaster information.

Figure: Examples of Road Disaster in Developing Countries

This technology can efficiently collect disaster information based on the inspection results by the tablet. Collected information can be transferred automatically to the data server via internet. Road administrators can comprehensively analyze the collected information and formulate appropriate countermeasure plans.

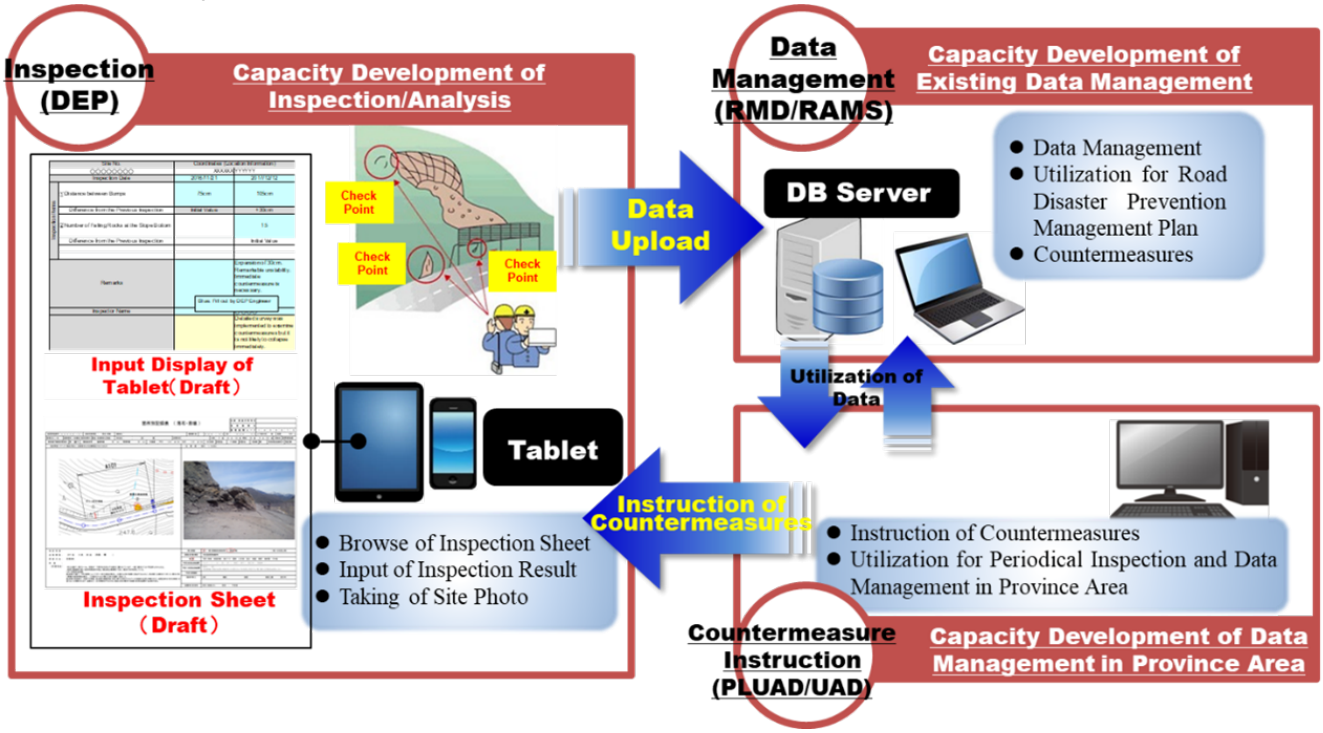

Figure: Utilization of Collected Information for Countermeasure Plans

Achievements of Examples

Figure: Disaster List (Based on Inspection Results)

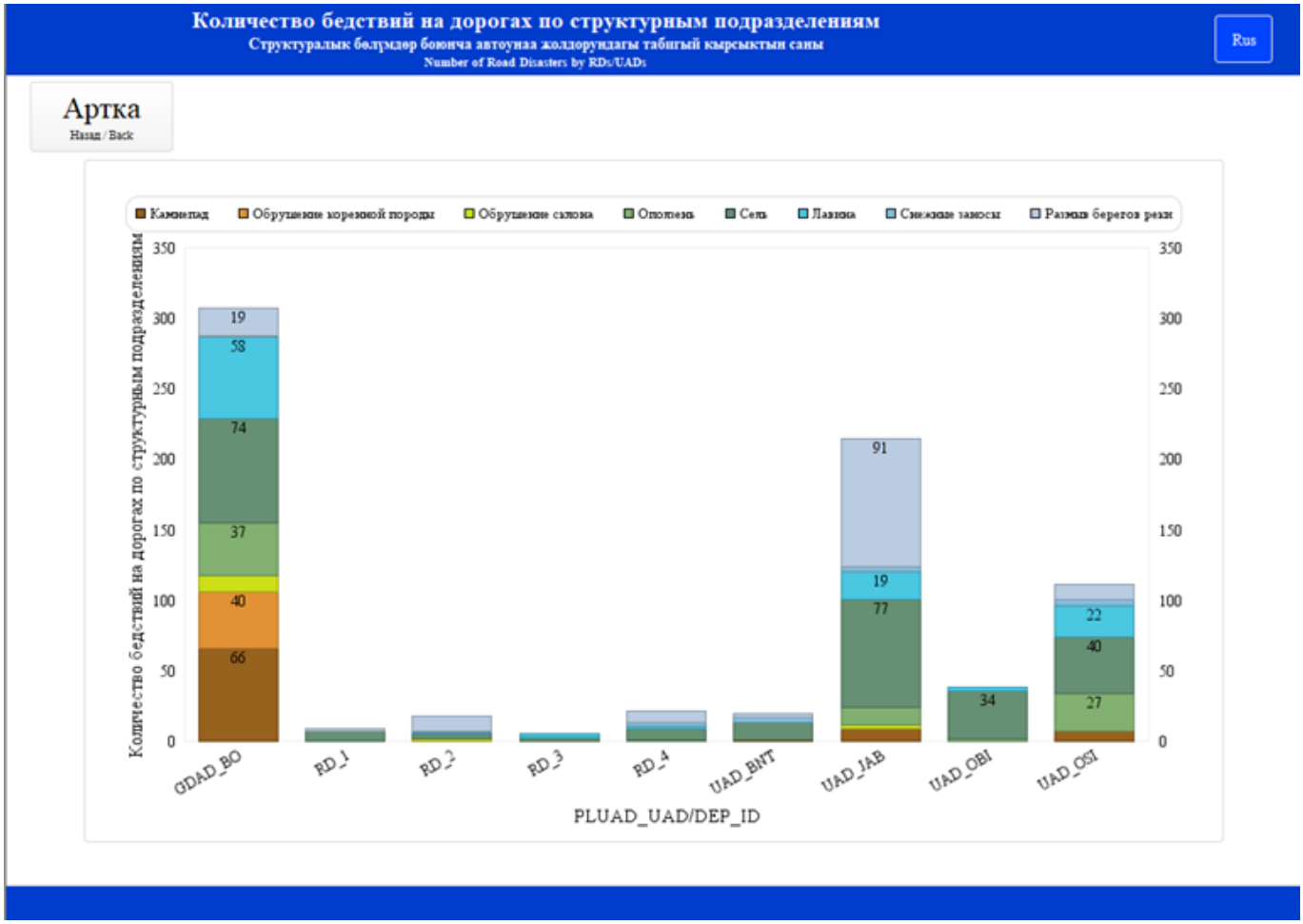

Figure: Histogram Number of Road Disaster

Corporate Profile

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