

Study on Rainfall Information System Technology by Common Minute Radar

Whole term

1993.4 ~ 1996.3

(Purpose)

Rainfall information system for operation and management systems of stormwater drainage facilities using rainfall radar has already started to operate in big cities in the Metropolitan area and the Kansai region.

However, the observation areas of minute radars in current use are restricted within specific regions, making the overall arrangement of the rain gauges scattered and data compatibility between the regions inadequate thus resulting in fragmented rainfall information in terms of the national scale.

Consequently, in this study, radar technology, communication technology, data format etc. were standardized to achieve a rainfall information system covering a very wide area aiming to prevail and promote the minute radar rainfall information system.

The standard specifications of the rainfall information technology by common minute radar was proposed based on various technologies to improve the precision of rainfall information and to establish the system and the standard specifications of the system design which will meet demands of users.

(Results)

1) Proposal of the system concept

The structure and functions of the system were proposed along with the significance and effects of installing the rainfall information system using the common minute radar.

2) Proposal of the main specification

The main specification of the common minute radar were set for the observation mesh scale, period, radius, altitude and frequency band, respectively.

3) System design process

The processes to determine the function, specification and system structure were proposed for the radar site system, central control system and user system, respectively, along with the specifications for the each facility and equipment.

4) The standard specification

The standard specifications were proposed for each of the radar, data processing, monitoring and power source facilities which should be equipped with the rainfall information system by the common minute radar.

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Keywords

radar rain gauge, rainfall information system, system concept, standard specification