Release of Common MP Hydrological Data Acquisition Tool

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(Keywords) hydrological database management system, Common MP, data acquisition tool

1. Introduction

The hydrological database management system[(1)], of which national hydrological data under the jurisdiction of the Water and Disaster Management Bureau of Ministry of Land, Infrastructure, Transport and Tourism, that can be inspected and acquired by anybody, is commonly utilized. However, there have been inconvenient points such as a distinct restriction on the data volume accessible in a lump for analysis and a difficulty in working with application software for water・material circulation analysis. In addition, it has been an important issue to configure an interface to the database in Common MP[(2)], a software developed and operated by NILIM, and improve usability of the analysis application, with the objective that engineers can easily conduct hydraulic and hydrological analysis and make a technical judgment based on ample studies and so forth.

Therefore, we report here that a hydrological data acquisition tool[(3)] (Figure), which can acquire hydrological data in a lump from the hydrological water quality database, has been developed and released.

Figure: Screen image of hydrological data acquisition tool for hydrological water quality

2. Outline of hydrological data acquisition tool

The hydrological database management system is equipped with standard interface,[(4)] which can provide data in reply to requirements of the client PC, and an application software conforming to this can freely acquire data.

Common MP hydrological data acquisition tool is prepared in conformity with this standard interface and it is possible to acquire data from more observation stations and for longer duration comparing to using web browser (Table) and accordingly, it is convenient for analysis to be conducted. Also, acquired data can be used as it is in Common MP simulation. The hydrological database management system, furthermore, stores real time data as well and it is also possible to prepare real time flood forecast system by combined use of this data and concurrent computing facility of multi simulation project incorporated in Common MP Ver1.2. [(5)]

Table: Comparison of data volume which can be acquired in a lump

		Data hydrological acquisition tool		Web browser	
		Period	Number of observation stations	Period	Number of observation stations
Real time data		-	50	-	1
The past	10 minutes data	Seven days	50	Seven days	1
	Hour data	One year	50	31 days	1
	Day data	10 years	50	One year	1
	Year statistics data	Whole period	50	Whole period	1

3. Future development

A new function to connect hydrological data to software by developing the hydrological data acquisition tool was added. It is scheduled, from now on, to enhance software which utilizes this tool and to promote application to practical business such as river projects.

[Sources]

(1) Hydrological database management system: http://www1.river.go.jp
(2) Common MP: http://framework.nilim.go.jp
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(5): Yoshimiki KIKUMORI et.al: Function improvement of CommonMP for real time flood forecast, Japan Society Civil Engineers, Annual conference of scientific lectures, Collection of lecture summaries Vol.67 No.II-145, pp.289-290, 2012.