HITACHI
Inspire the Next

Supporting the operation and maintenance of pipe networks
Pipe Network Management System

System Configuration

Flexibly available from the client server type to the web type

Client Layer
- Web Browser — Other Sections
- Web Server
- Plotter
- Printer
- Client
- Home, etc. — Web Browser
- Web Server
- Outside — Mobile Terminal
- Internet

Application Server Layer
- Server
- Water Billing System
- GIS System
- Fetching data from existing systems — Existing Systems

Database Layer
- Map Information Database
- Pipe Network Analysis Database
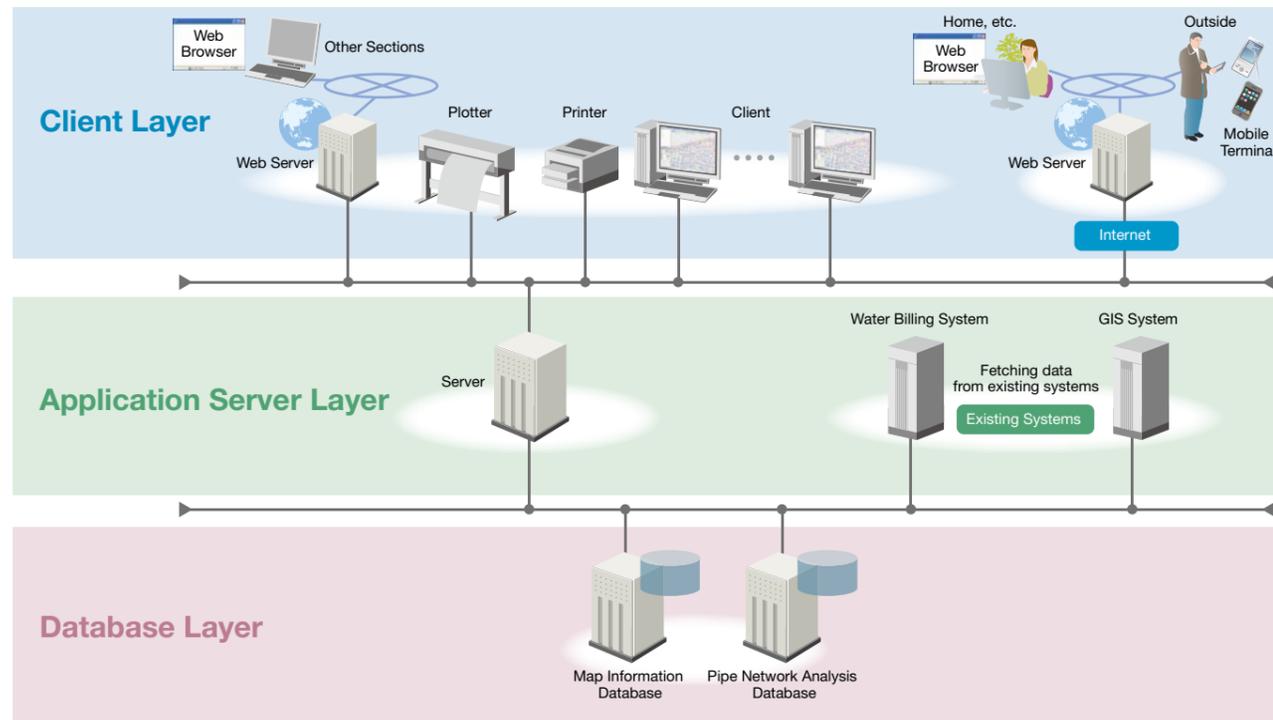
System Requirements

Client Requirements Specification

No.	Items	Specification
1	Operating System	Microsoft® Windows® 7 Professional 64 bit (SP1)
2	CPU Clock	Intel® Core 2 Duo 2.0 GHz or higher
3	Main Memory	4.0 GB or more
4	HDD Capacity	100 MB free space or more
5	Display Resolution	1280×1024 (approx. 16,700,000 colors) or more
6	Java VM	Java SE Runtime Environment 6 Update 30
7	Language	English
8	Supported Map Format	DXF, Shapefile, CSV
9	Supported Image Format	JPEG, PNG, TIFF

Server Requirements Specification

No.	Items	Specification
1	Operating System	Microsoft® Windows Server® 2008 R2 Standard
2	CPU Clock	Intel® Core 2 Duo 2.0 GHz or higher
3	Main Memory	4.0 GB or more
4	HDD Capacity	15.0 GB free space or more
5	Display Resolution	1024×768 (approx. 16,700,000 colors) or more
6	RDBMS	Oracle® Database 11g Release 2 (11.2) Standard Edition One
7	Java VM	Java SE Runtime Environment 6 Update 30

✴ Microsoft, Windows, and Windows Server are registered trademarks of Microsoft Corporation in U.S.A. and other countries.
✴ Intel is a trademark or registered trademark of Intel Corporation and its affiliates in U.S.A. and other countries.
✴ Oracle and Java are registered trademarks of Oracle Corporation and its affiliates in U.S.A. and other countries.

The specifications of the product described in this brochure are subject to change for improvement.
For inquiry, contact our sales representative.

| IW-110 | 2013.04 |

Printed in Japan (ICC)

Hitachi's GIS solution solves your problems.

- A lot of trouble manage paper drawings.
- Future pipe network planning is difficult.
- Wish to share pipe network information.

This system will support your daily pipe network management and future pipe network plans.

Digitizing
This system digitizes pipe network data into exact drawing data to facilitate data management in expansion and update of pipe networks.

Planning
This system will support planning of pipe networks and water service areas by using various pipe network simulations.
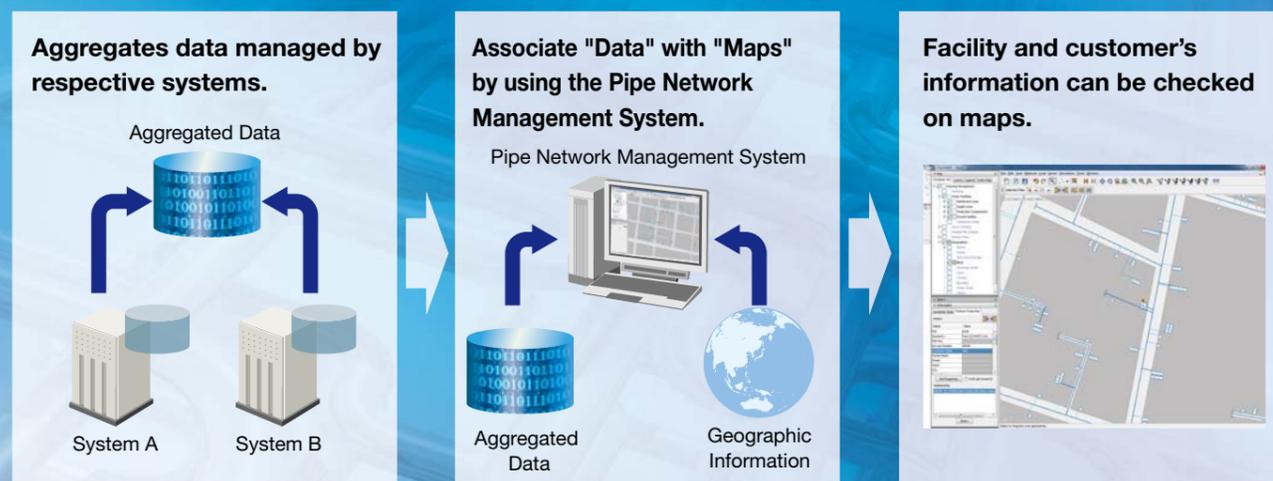
Sharing
This system will enable sharing of pipe network information by multiple terminals and quick communications among Pipe Network Planning, Customer Service, Maintenance and other sections.

What is the Pipe Network Management System?

The Pipe Network Management System is software for managing and analyzing waterworks based on the Geographic Information System (GIS).

This system can enable water service works to be efficient by locating system-accumulated customer's information on maps. This system can also offer optimum solutions to realize safe and secure water environments by using a variety of simulation functions.

Aggregates data managed by respective systems.
Aggregated Data
System A   System B

Associate "Data" with "Maps" by using the Pipe Network Management System.
Pipe Network Management System
Aggregated Data   Geographic Information

Facility and customer's information can be checked on maps.
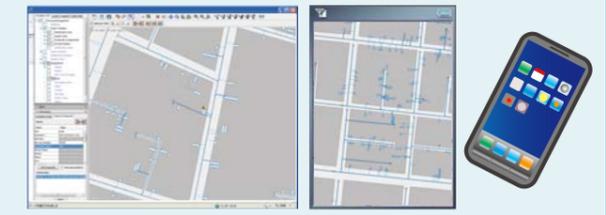
Main Functions

Pipe Network Analysis
- Able to conduct simulations of pressure distribution, flow distribution and flow direction display.
- Able to manage planned pipe networks in the database.

Pressure distribution simulation   Flow direction display simulation

Accessible from Web Browsers and Mobile Terminal
- Displays map data on a web browser.
- Able to eliminate software installation procedure and save management cost.
- Able to also be used on a tablet computer or a mobile terminal.

Display on a web browser   Display on a mobile terminal

＊Display functions of a web browser and mobile terminal are partially different.
＊The screen shown are concept images.
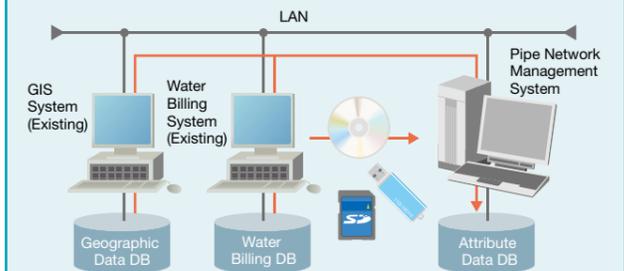
Water Suspension Simulation
- Simulates water suspension by specifying arbitrary shutdown points
- Displays water suspension regions and customer meters affected by the water suspension on screen.
- Displays operation valves to minimize water suspension regions.
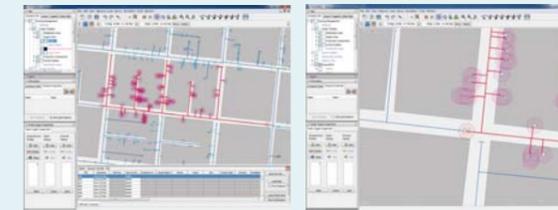
Display of water suspension regions   Display of operation valves

Data Acquisition from Existing Systems
- Periodically collect data from existing water billing systems and GIS systems through LAN or media to always make data latest.

LAN
GIS System (Existing)   Water Billing System (Existing)   Pipe Network Management System
Geographic Data DB   Water Billing DB   Attribute Data DB

＊The data delivery method should be confirmed in advance with the system supplier.

System Utilization Examples

Case 1 Quick response to inquiries from customers
Problem
No water! Please come and check.
It takes time to collect customer's information.
Solution
The system show the customer's information on the map. Easy to understand.

Case 2 Simulating water suspension regions and notifying the customers of water suspension in advance
Problem
We always need to find out the affected area manually...
I wonder to what extent I should notify of the water suspension.
Solution
The system simulates and shows water suspension area on the map.

Case 3 Real time sharing of information by interlocking computers with GPS [*1]
Problem
Where should I go?
Any better ways to give them necessary information and instruction.
Solution
The field and the office share the same information.
This is the right work instruction I need.
I can give exact work instructions from positional information.

＊1 Global Positioning System

＊The screen shown is a concept image.