

Investigation of Cross-jurisdictional Management Using ICT for the Sustainable Wastewater Projects

(Research of FY 2019)

1. PURPOSE

Each WWTP has different monitoring control systems or information management systems ("Cross-jurisdictional management system"), which are incompatible. It is one of the challenges of wide-area management. Compatible systems are required without large-scale system modifications to accelerate the cross-jurisdictional development of sewage facilities. This study aims to establish a compatible cross-jurisdictional wastewater management system.

2. Outcomes of This Year

(1) establishment of the standard protocol system

Setting the standard communication specification (common protocol) connecting different systems by the manufacturer enabled the following operations.

- Monitor, control, and ledger sheet development of multiple WWTPs and pump stations, installing monitoring control panels
- Unify alerts and data of WWTPs and pump stations by installing monitoring control panels.

(2) Establishment of a remote desktop system

With monitoring control panels, remote monitoring control and ledger sheet printing became possible in WWTPs.

(3) Implementation benefits

Combining the above (1) and (2) depending on the existing facilities enables monitor, control, and ledger sheet development required for cross-jurisdictional management. Flexible management becomes possible depending on facilities' conditions, and maintenance cost reductions can be expected.

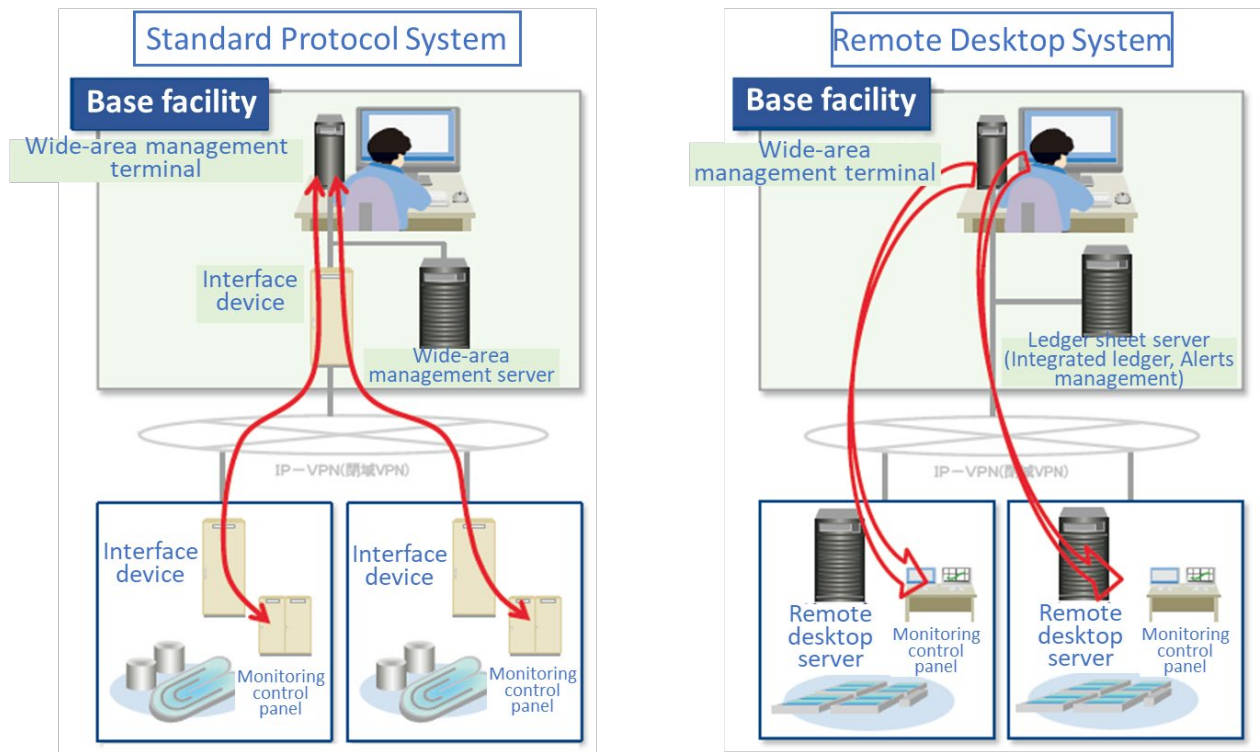


Figure 1. Standard protocol system (left),
 Figure 2. Flow diagram for system consideration (right)

3. Conclusion and Future Issues

The study made the desktop verification of the implementation benefits. Accelerating cross-jurisdictional management must present good examples of the real-scaled established system and its implementation benefits to municipalities.

Keywords: **ICT, Cross-jurisdictional management, Monitoring control system**

