Development of Integrated Image Monitoring System by Unification of Public CCTVs - Part I

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The purpose of this research is to build the public image information monitoring service platform by integrating the ground based CCTVs of many public institutions. We developed the techniques for unifying various kinds of operational CCTV systems covering all over the country. We constructed multi function of image collecting system, multi functions image offering system under the web and mobile environment. The final goal of this project is to provide an integrated intelligent image service system which can provide live images from almost all kinds of the conventional CCTVs through the internet. The objectives of this study is to build the public image information monitoring system which can combine, collecting, modifying, monitoring from many public institutions having ground CCTV facilities.
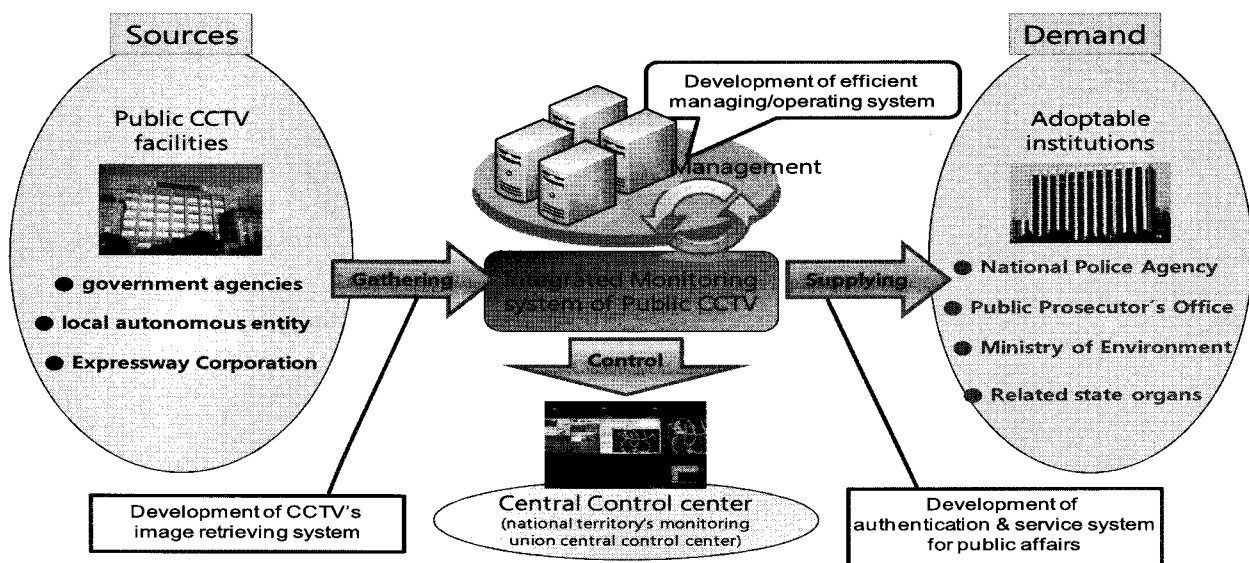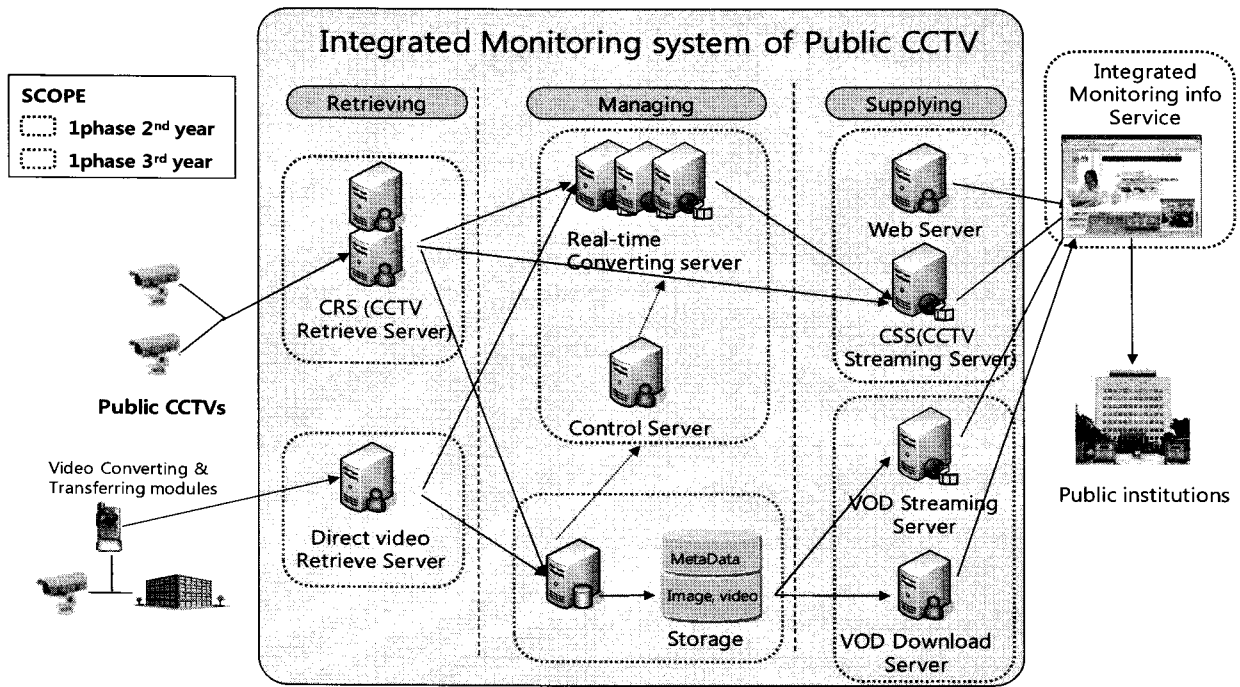
Figure 1. System consist Flow

Figure 2. System Architecture overview

The system architecture is organized 3 major parts which is retrieving section through CRS & Direct video retrieve server, managing section with real-time converting server, control server & storage area and supplying part with web server, CSS, VOD streaming & download server.
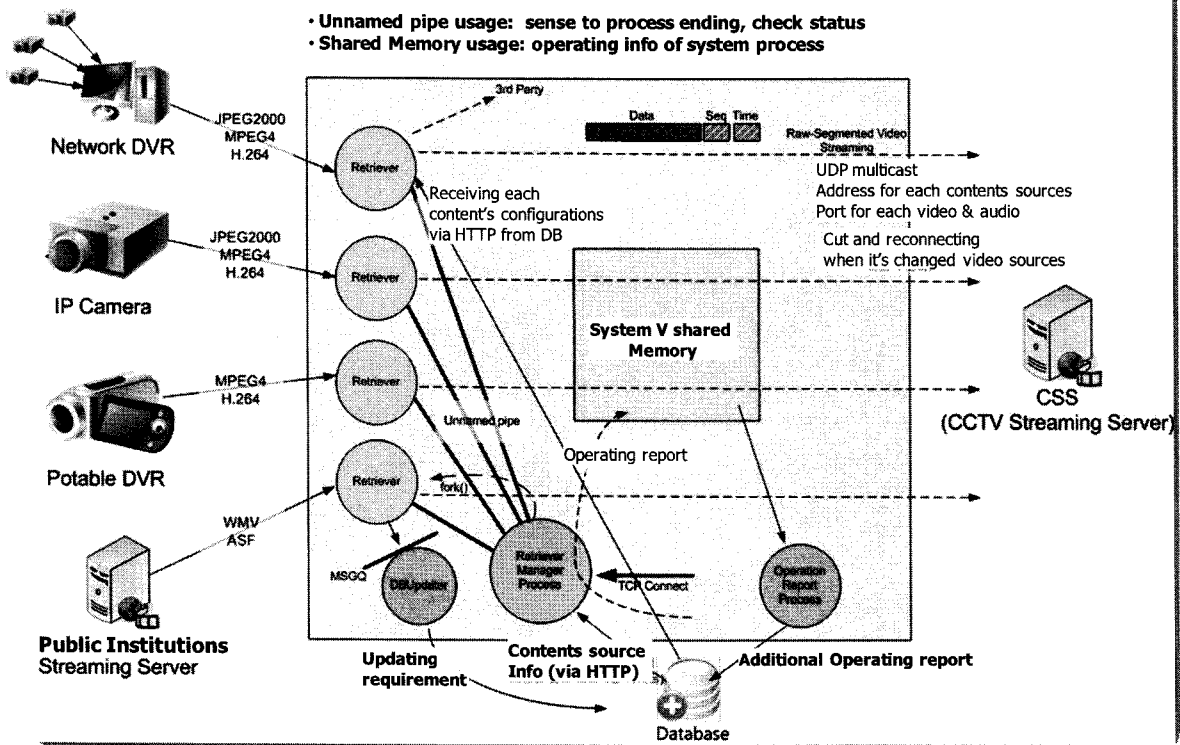
< CRS(CCTV Retrieve Server Architecture >

Figure 3. CRS(CCTV Retrieve Server Architecture

Usage of unnamed pipe is sensing to process termination and checking status in CRS, shared Memory is processing operation info. Also all of frames are transferring by under a second unit of current time.
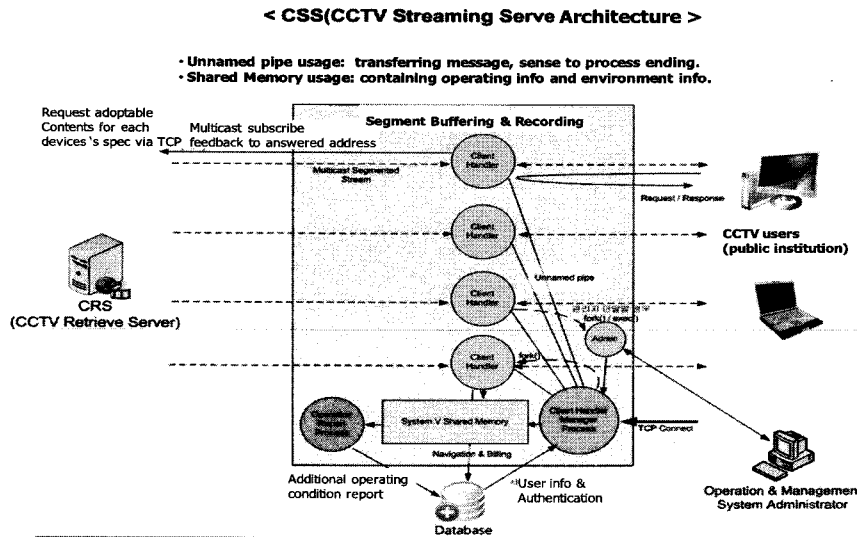

Figure 4. CSS(CCTV Streaming Server Architecture

Usage of unnamed pipe is sensing to process termination and transferring message in CSS, shared Memory is containing operating info & environment info. Also it's perceived access to managing system then running Client Handler is working fork()/exec() to Admin process.
Managing process sends command order to Manager in order to hand ever related process via pipe.
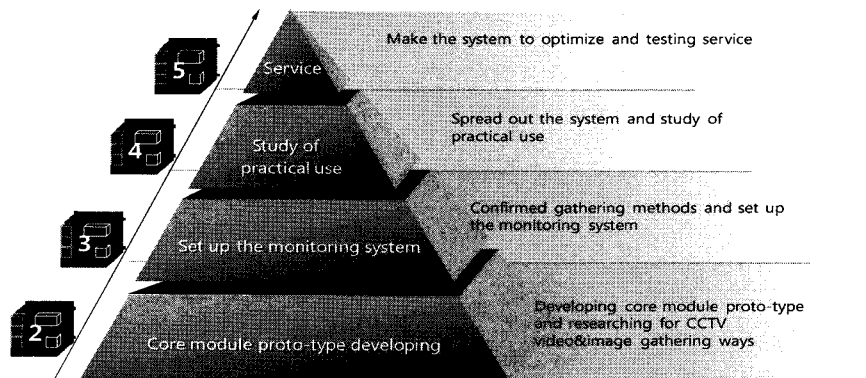

Figure 5. Developing plan of 5-year road map

It will be planed basic data of research development during the business terms every year.
In the future, until 5th year, it will be upgraded from the First-generation analog CCTV and the second-generation DVR, to the third-generation high quality DVR, to the multi function's video image collecting system by all type of video equipments.