IVC APPLICATION NOTE:

Waterway Monitoring

The U.S. Army Corps of Engineers is using IVC video systems for a variety of applications including remote monitoring of reservoirs, monitoring of locks along the upper Mississippi River, and general security surveillance.

As a preliminary evaluation of IVC camera's ability to produce close-up views of distant objects in difficult conditions, two cameras were installed to monitor a river lock from district headquarters. Based on the success of that test, additional outdoor PTZ cameras were deployed.

Cameras were installed at several public reservoirs. The reservoirs were built principally for flood control but they have become active recreation areas. The Agency uses the cameras at these sites for security monitoring and they are operated by the reservoir staff. The video is also used to provide information to the public about conditions at the lakes for campers and boaters. Using IVC's panorama feature, panoramic views of the lake are updated periodically throughout the day and posted on a public web site.

The ACOE is also deploying IVC cameras at additional sites to monitor locks on the upper Mississippi River and possibly on the upper Illinois River. A camera is placed at each end of the lock where they track barges as they travel through. As barges approach the lock entry gates, their movement is recorded on video. This enables the identification of barges responsible for damage to the gates and locks. IVC's Relay Server recording function is ideal for this application because it records a continuous, rapid sequence of individual time stamped jpeg images that can then be viewed in fast or slow motion, or individually, frame at a time to determine and document how and when the damage occurred. The entire video and/or selected images can be copied and used as needed. In addition, the video can be archived to CDs.

There are 22 locks on the upper Mississippi River where the IVC system is planned and possibly 12 more on the Illinois River. Relay Servers and cameras will be placed at each location. The locks are staffed 24/7 and the lockmaster views the video locally. Also, all camera functions and the stored video review capability, will be used remotely by district headquarters staff to view emergency situations such as a tug losing control of a barge. Additionally, district staff will be able to view and assist in problem solving stuck gates and equipment failures.

Use of the cameras for multiple purposes is possible because each of the cameras, regardless of its location, can be viewed and controlled by password authorized by multiple operators from their PCs with just a browser and no client software.