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CONTENTS

"Video File Transmission"
-Automatic transmission of recorded video to a broadcasting station

The Science & Technology Research Laboratories (STRL) has been working on improving the transmission environment so that news video materials can be gathered from locations that would normally present problems. One recent accomplishment involves the construction of "video file transmission" technology that is capable of delivering camera footage to a broadcasting station via a public network such as the Internet.

NHK has been working to enhance news reporting through the development of a skip-back recorder, which automatically records footage before and after an earthquake by detecting a tremor. Our new technology will also enable priority-based automatic transmission of weather-related information.

This technology records second-time scale video signals in a storage media as file data. These files are combined after simultaneous transmission. By retransmitting some of the files on a different line, the transmission will reach the broadcasting station even if some of the transmissions are interrupted. This enables reliable, high-quality video transmissions on interruption-prone lines such as mobile phone networks.

A transmission device incorporating this technology and controlled from the broadcasting station can crop out video segments from constantly updated stored video. Because simultaneous transmission of video signals from multiple locations may use up the available bandwidth capacity, the number of files sent at one time can be varied in order to control the transmission rate. For instance, a remote command from the broadcasting station can prioritize video footage from locations experiencing more severe tremors during an earthquake (Figure).

STRL will examine the practicality of automatic transmission of footage from remotely located cameras via mobile phone networks during natural disasters, including earthquakes, torrential rain, flooding, and volcanic eruptions. We will continue our studies on automatic monitoring at more locations in order to promptly deliver local video coverage during an emergency.

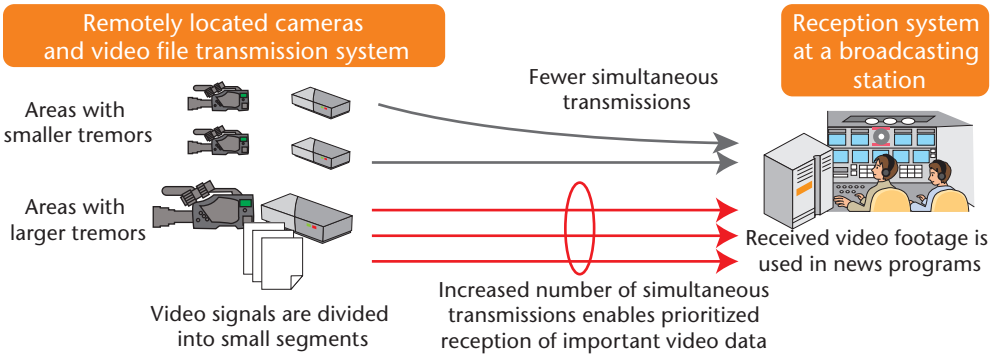

Figure: Video collection using a video file transmission technology