Real time Sudden Infant Death Syndrome monitoring system using HDR imaging

ABSTRACT

Sudden infant death syndrome (SIDS), also known as cot death or crib death, is the sudden unexplained death of a child of less than one year of age (specifically 2-4 months of age). This usually occurs in sleep and there is no evidence of struggle such as noise. Diagnosis say that the death remains unexplained even after a thorough autopsy and detailed death scene investigation. Hence it is difficult to detect. Therefore, it is necessary to continuously monitor these patients. The system developed in this project tries to detect the disturbances by using the non contact based system to monitor the breathing rate. This is done by acquiring the real time HDR (High Dynamic Range) video of baby and processing that video to get the breathing difference. Since the changes observed in the video are subtle, so they are detected. Later, if the conditions of SIDS are detected, suitable alerts are generated to the concerned individual or hospitals so that quick action may be taken.