

Designing Internet of Things-based baby safety bed prototype with *Real – Time Monitoring System*

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ABSTRAK

Babies are very vulnerable and smooth. Healthy baby growth and development are very dependent on the birth process, patterns of care, and feeding patterns. Babies feeding pattern should have balanced nutrition. Furthermore, baby needs more her parents' attention, especially in the safety and comfort of the baby's condition. The safety context is not just protection for babies but also to prevent pain or injury by making them comfortable in their activities. However, busy parents can reduce attention in supervising the activities of their babies while in bed. The baby crib is a place where babies position to get comfort. Therefore, a prototype baby safety bed was designed with an Internet-based Real-Time Monitoring System. This design aims to make it easier for housewives to supervise their babies when they are carrying out home activities such as cooking, washing, and ironing clothes using their own android smartphone. Real-time monitoring here is used to monitor the movements of the baby during bedtime by recording its activities using a camera available above the bed equipped with a raindrop sensor for baby's detection of bedwetting, a vibrating sensor for detection of babies colliding with bed restraints and also a sound sensor for detection baby crying. All activities performed by babies are sent on an android smartphone in real-time.

Keywords: *baby, smartphone, android and real-time.*