

ABSTRACT

The background of this research is because the accident and death that happen in mountain has increasing each year until 2019, and one of the problem is because the climbers are not equipped by a proper tools to mountain climbing, specially for beginner climbers, who just start climbing and not yet investing on a proper tools.

Mount Gede is a mountain that located in West Java, and has relatively easy track for beginners, many beginners choose this mountain to start their climbing activities. Therefore this mountain has to prepare a tool that can loaned to the climbers, so they could have a tool to support mountain climbing activity, and the tool also could support the mountain base and SAR team to do evacuation faster with more information of climbers location using RFID Technology.

This research was developing RFID based watch to support mountain climbers activity. RFID (Radio Frequency Identification) is a technology that consist of 2 product tag and reader that communicate to each other, and could be use for tracking, using quality function deployment method, so the product could meet the customer need statement with the first rank on planning matrix is integrated with mountain base with normalize raw weight is 0,13 and technical response to the researcher with the first rank of normalize raw weight is 0,149 related to product durability.

The result is a RFID based watch that equiped with watch, compass, emergency sirine, and integrated with mountain base using RFID technology and also it is already comply with stardard of *diver's watch* from ISO to ensure that the product durability and could survive in extreme activity like mountain climbing.

Keywords : RFID, Watch, Mountain Climbing, Quality Function Deployment, Mount Gede