Abstract- This study aimed to identify a specific human with the accurate position measurements by integrating the networked laser range finders in the intelligent space and an wearable acceleration sensor with the human. A human identification method based on associating detections of walking behaviors from both sensors is proposed. Parameter optimization was also performed for improvement of identification. System configurations and implementations using RT component are also described. Some experimental results showed a feasibility of the proposed method. In the proposed system, only walking detection results are communicated among sensors. The proposed system with small data communication is effective for networked sensor systems like intelligent spaces.

Index terms: Acceleration sensors, Human identification, Human tracking, Intelligent Space, Laser range finders