



# ENSURING THE SAFETY OF VULNERABLE RESIDENTS

## KEEPING TRACK OF NURSING HOME RESIDENTS WITH WI-FI ENABLED WRISTBANDS



### KILLURE BRIDGE NURSING HOME

Located just outside Waterford city in the southeast of Ireland, Killure Bridge Nursing Home accommodates 79 elderly residents. A locally owned facility, its 60 bedrooms overlook four acres of landscaped gardens.

Residents are encouraged to move around the nursing home as they please. But residents who have dementia are prone to wandering outside the building and getting lost in the grounds. Killure Bridge's management set out to see if technology could provide a solution that would give residents freedom of movement while also ensuring that staff are alerted if they leave the confines of the facility.

Following a review of the technology options available, a Motorola Solutions' Wi-Fi system was selected. Its RFS 6000 wireless LAN controllers and AP 650 802.11n access points were installed. The wireless coverage provides continuous monitoring of the position of the Wi-Fi enabled wristbands provided to residents and the Wi-Fi enabled badge tags used by staff. With Real Time Location System (RTLS) software linking the wristbands and badge tags to the access points, management can trace and view the movements of residents around the facility. If a resident attempts to leave the building an alarm is triggered, instantly alerting staff.

Killure Bridge now knows the whereabouts of its most vulnerable residents at all times, so residents' safety is guaranteed.

#### CUSTOMER PROFILE

**Organisation**  
Killure Bridge Nursing Home

**Location**  
Ireland

**Industry**  
Health

**Partner**  
Dimension Network Systems

#### Motorola Solutions' products

- RFS 6000 wireless LAN controllers
- 34 AP 650 802.11n access points

#### Applications

- Tracking of residents and staff using Wi-Fi tracking technology and a wireless LAN

**“Residents’ safety is priority at Killure Bridge and when residents wandered outside the building we were always worried that something would happen to them. With the new tracking system vulnerable residents can still move around as they please; but now we know where they are at all times and staff are alerted instantly if they walk out the front door. In addition our staff spend less time trying to find residents, saving valuable time that is better spent on patient care.”**

Mary Burke, Manager, Killure Bridge Nursing Home



## CHALLENGE

Killure Bridge likes to allow residents free movement around the care home as far as possible; but this puts residents with dementia at risk as they often wander outside and get lost in the grounds. Previously an alarm sounded at the front door every time someone left the building: but the noise was only heard at reception and would go unnoticed if the desk was unstaffed. Plus, the system led to many false alarms as the siren would on occasion sound if anyone, including residents’ relatives or staff members, left the building.

To protect the safety of residents Killure Bridge decided to install a system that would allow it to track the whereabouts of vulnerable residents at all times while still allowing them to move freely around the home.

## SOLUTION

After reviewing available technologies, Killure Bridge opted to go with the recommendations of Motorola Solutions’ partner, Dimension Systems Solutions. The company proposed using a Motorola Solutions’ wireless infrastructure and RTLS software to trace the movement of at-risk residents.

Motorola Solutions’ AP 650 802.11n access points are installed throughout the building: a Wi-Fi survey was carried out to ensure the access points were positioned in the most appropriate locations. Staff and residents need to be within range of three access points at all times. This allows the system to triangulate the position of the Wi-Fi enabled wristbands and badge tags worn by residents and staff respectively.

RTLS software is installed on Killure Bridge’s Windows-based central server and a blueprint of the facility is uploaded onto the system. Residents’ wristbands, staff’s badge tags and the AP 650 802.11n access points are all linked to the central server via a Motorola Solutions’ RFS 6000 wireless LAN controller. Parts of the building, such as the kitchen and the front door, are designated as restricted zones.

For more information on Motorola Solutions’ robust and self-healing Wi-Fi networks please visit us at [www.motorolasolutions.com/services](http://www.motorolasolutions.com/services) or access our global contact directory at [Motorola.com/Business/XU-EN/Contact\\_Us](http://Motorola.com/Business/XU-EN/Contact_Us)

The wireless network ‘listens out’ for the wristbands or badge tags as residents or staff move around the building and sends the coordinates of each device back to the server. The wearer’s location within the building shows up as a moving red dot on screen. If a patient wearing a wristband crosses the threshold of a restricted zone, it sends an alarm to staff members’ badge tags and to the central server.

## BUSINESS BENEFITS

Vulnerable residents’ safety is ensured as their location is known at all times. Killure Bridge has a stock of spare wristbands so if a device breaks or needs to be recharged it can be replaced immediately to ensure the continuous operation of the system.

The staff badge tags mean that management can easily locate nurses and send messages directly to them via the LCD screen on their tags, allowing them to respond faster to emergencies.

Time savings have been substantial as staff no longer spend hours walking around the building and its grounds searching for residents. And the reception no longer needs to be staffed at all times as nurses hear the alarm on their badge tags regardless of their location within the building: this also means that there is no danger of alarms going unnoticed. Plus, messages can be sent to the badge tags from the central server so information can be passed on to a number of staff members simultaneously.

The system is highly scalable. The number of wristbands and badge tags in use can be increased as necessary without having to install any more access points. And the restricted zones within the building can be easily added to or amended.

Residents’ relatives’ satisfaction with Killure Bridge has improved substantially as their loved ones’ whereabouts is known at all times and their safety is assured.

## Benefits

- **Increased resident safety:** Staff can tell exactly where at-risk residents are at all times
- **Better use of staff resources:** Nurses no longer waste time looking for residents
- **Reassurance for families:** Residents’ relatives know that their loved ones can be easily located and their safety is guaranteed