



# DA&M: A Disaster Alert & Management System



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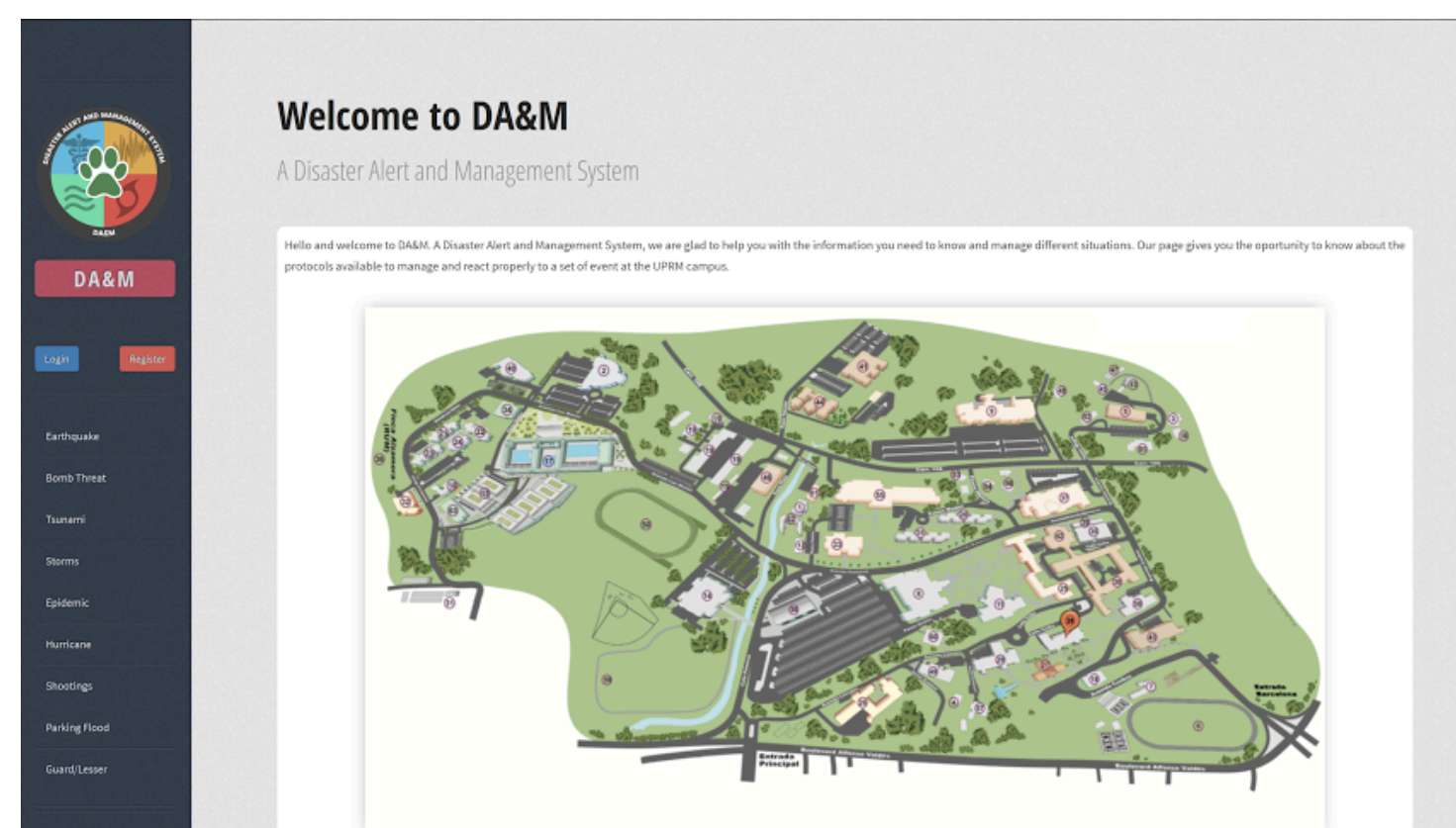
Liaison: Nestor Escalera



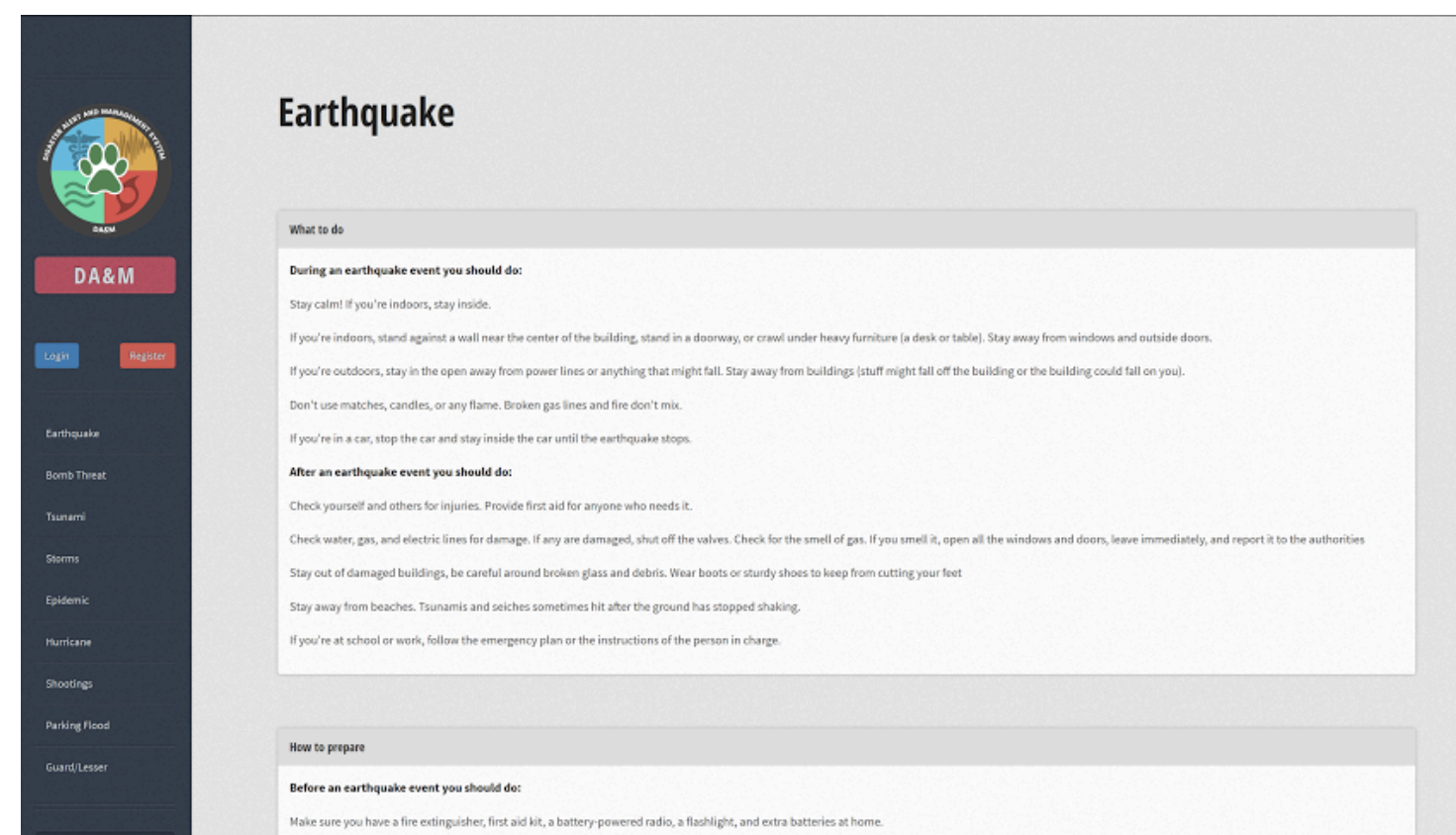
## Background

- **Machine to machine (M2M)** refers to technologies that allow both wireless and wired systems to communicate with other devices of the same type.
- The **VERsatile Service-Oriented Wireless Mesh Network (VESO-Mesh)** is a mobile ad-hoc network (MANET) that provides data storage and processing capabilities in each node.
- On a previous project, VESO Mesh was successfully used as a platform for M2M applications. An ICD was compiled with this configuration.
- **Motivation:** To develop an application, using VESO Mesh as the platform, which not only alerts users about a disaster but also helps them manage it.

## Web and Android Applications



Above: DA&M Home Page



Above: DA&M Earthquake Disaster Page

### Features:

- Disaster descriptions including how to prepare for the disaster and what to do when the disaster strikes.
- List of emergency contact numbers and reference links where users can learn more about each disaster.
- Registered users can opt to receive email and SMS disaster notifications.
- Real-time alerts for the disasters will be available on the applications.

### Design:

- ASP.NET and .NET core.
- Fully responsive design.

## DA&M

- **Purpose:** To develop a system which helps users prepare, alert and manage disasters to create a more conscious community.
- User-friendly GUI makes it easier to navigate through the information.
- Disasters are explained in a clear and concise way making it understandable for users of any age group.
- Alert system has immediate response giving users the maximum amount of time to react in the event of a disaster.
- Node system is built with Commercial Off The Shelf (COTS) devices.

## Node System



- Each network node provides serial interface components that allow communication with external embedded systems devices such as sensors.
- DA&M has nodes strategically placed across the UPRM campus with the purpose of collecting and processing data, and storing information.

## Future Work

- Android and IOS Application.
- Add disasters such as: Active Shooter, Telnet Server Crash, and Campus Security Warnings.

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