PROJECT NAME:

**Emergency Command Center (E-Nodes)**

SOFTWARE/HARDWARE REQUIREMENTS SPECIFICATION CHECKLIST

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | ASSIGNED TO | YES | NO | REMARKS |
| **Output**  ***Web Application***  ✓The Web application must show a real-time list of who is online and offline in a discussion room  ✓Messages should be displayed with the sender's registered name  ✓The Web application must show an offline map with:  Street Names  Icons Representing Different Marker Types  3 Diffrerent Zooms  Correctly plotted markers  Correctly sized markers  ✓The Web application must provide the end user with a summary of high priority issues to address at the top of the page.  ✓The Web application should show a bulletin board that will display all posts by all users of the service.  ✓The Web application must show the end users a summary of distress calls to address at the top of the page.  ✓Distress calls to address at the top of the page must be removed once it has been marked resolved by the user.  ✓Messages of users must be displayed according to time received  ***Connection Infrastructure***  ✓The nodes must be able to display all neighbor nodes in the network  ✓Each node should be able to show its real-time updated database  ✓ Mesh nodes' access points should be discovered by end devices  ✓Mesh nodes' access points must show an enter WPA2 passcode when first connecting to it. |  |  |  |  |
| **Input**  ***Web Application***  ✓The Web application must automatically read and save to the database the device MAC address of a client accessing it  ✓Posts sent by the users must automatically be entered into the database  ✓Messages entered by the user must be automatically saved to the local database  ✓Users should be able to choose different types of markers to be plotted on to the offline map.  ✓Marker data must automatically be saved to the database when a user plots markers on the map  ✓Response teams using the web application must be able to mark an issue as resolved.  ***Connection Infrastructure***  ✓Data from neighbor nodes must be saved properly in the local database  ✓Nodes should be able to accept the correct WPA2 passphrase  ✓The communications system must be able to store and arrange the data properly |  |  |  |  |
| **Process**  ***Web Application***  ✓The device must send user's correct GPS locations and type of issue when using the distress signal feature  ✓The web application must **convert** the GPS location and issue priority data into a distress call for other users.  ✓The Web application must sort distress calls by priority before displaying at the top of the home page.  ✓The distress calls must be automatically plotted onto the map as emergency markers  ✓Issues marked as resolved must be removed from the map.  ✓All communications data should be uploaded onto the database and distributed to other data stores across the network  ✓ Distress calls, user information, and marker data should be updated on all data stores across the network  ***Connection Infrastructure***  ✓Each node that is on the network must be able to send to nodes 2 hops away.  ✓Nodes should be able to receive data from other nodes  ✓Data sent by users end devices to the access points must be correct and saved properly  ✓Database replication must have less than 20% loss of data |  |  |  |  |
| **Performance**  ***Web application***  ✓Databases should be updated in real-time across all hosted web applications on all nodes in the network  ✓The distress calls must be displayed in less than 10 seconds from when it was posted  ✓Chat messages must be displayed to remote nodes in less than 5 seconds after it has been sent.  ***Connection Infrastructure***  ✓Nodes should be easy to deploy (plug-and-play)  ✓Each node must support up to 8 connected devices simultaneously.  ✓Response time between each node must not exceed four seconds.  ✓The system be working fine after being open for more than 8 hours.  ✓Within the recommended range, node to node communication should have less than 20% packet loss  ✓ Node-to-node messages must be transmitted in less than 3 seconds  **Control**  ***Web Application***  ✓Only the designated admin and the one who posted a distress call can mark it resolved  ✓The system must create an error log file that includes the error type, description,and time.  ***Connection Infrastructure***  ✓The system must only be accessible by users with the WPA2 passcode of the network. |  |  |  |  |