



PROJECT ORION

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People may experience some issues while providing a connection to the wireless internet in their houses which have especially concrete shear walls. Signal power attenuation results from prevention of the signals while they are passing through the solid objects and also due to the range.

There are several wireless network systems to get over these issues. Most common solution is mesh systems for those, but these systems would cost too much (approx. \$180.00) to the residents and SMEs. Therefore, many people are trying to solve it by setting up access points to the different places that signals cannot reach from the origin wireless point although it is not a solution literally. There is an option in access points' interface which is called "roaming". The option enables an auto connection to the nearest wireless point seamlessly, but this is achieved only when the connection has been lost to the current wireless point. It means that the option cannot supply an auto-switch to the wireless point which has the strongest signal that device could get. You have to select a wireless point that you want to connect or switch off your device's Wi-Fi and switch it on again to connect to the strongest wireless point.

At this point our software moves in handling all the issues which have been mentioned above. It has the ability to switch to the strongest signal that device gets without needing manual intervention. Our team is planning to get over this problem by using Wi-Fi list, sensor and GPS data efficiently as much as possible with less battery consumption. Our software will be running in the background by measuring the strongest signal periodically to reduce the battery consumption. We will add an option into it to determine how many seconds this period will be. The software is designed for the android devices at first because it is the most needed and open source platform. In the future, we are planning to expand it to the other platforms like Windows, Linux.