

## **Mobile Augmented Reality Solat system**

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A QIBLA compass, or qiblah compass, (sometimes also called qibla/qiblah indicator) is a modified compass used by Muslims to locate the direction of performing prayers.

In Islam, this direction is called qibla, which points towards the city of Mecca, specifically to the Ka'abah.

While the compass, like any other compass, points to north, the direction of prayer is indicated by marks on the perimeter of the dial, corresponding to different cities, or by a second pointer set by the users according to their own location.

To determine the proper direction, one has to know with some precision both the longitude and latitude of one's own location and that of Mecca.

Once that is determined, the values are applied to a spherical triangle, and the angle from the local meridian to the required direction of Mecca can be determined.

Ornate qibla compasses date back at least to the 18th Century. Some modern versions use digital readout instead of a magnetic pointer.

The Augmented Reality Solat is a convenient small mobile application for the Android system that shows the Qibla direction and also the five daily prayer times for Muslims using Augmented Reality technology.

Universiti Malaysia Sarawak researcher Dr Edmund Ng Giap Weng said when the application is launched, it will automatically get the location of the device (for outdoor, it uses the integrated global positioning system phone antenna, while for indoor, it uses WiFi or network provider to generate the coordinates) and open the camera view.

"When the user looks around using the camera view, he or she will be able to see the Qibla image being superimposed over the real environment, thus showing the bearing of the Qibla," he said.

Ng said if the user requests for the prayer time, based on the location of the device, the time, date and also the position of the sun, the application will automatically calculate the five different prayer times and display it on the screen.

Dr Edmund said the application can also show the direction and distance to some of the famous mosques, restaurants and hotels in Malaysia, the same way it shows the Qibla direction through the Augmented Reality technology.

"This means, users can instantly see the most interesting content nearby upon launching the browser, effectively turning it into a potent location-based search and discovery service with an augmented reality element attached to it rather than the other way around."

Source : Business Times