

iMuseum

a technical point of view

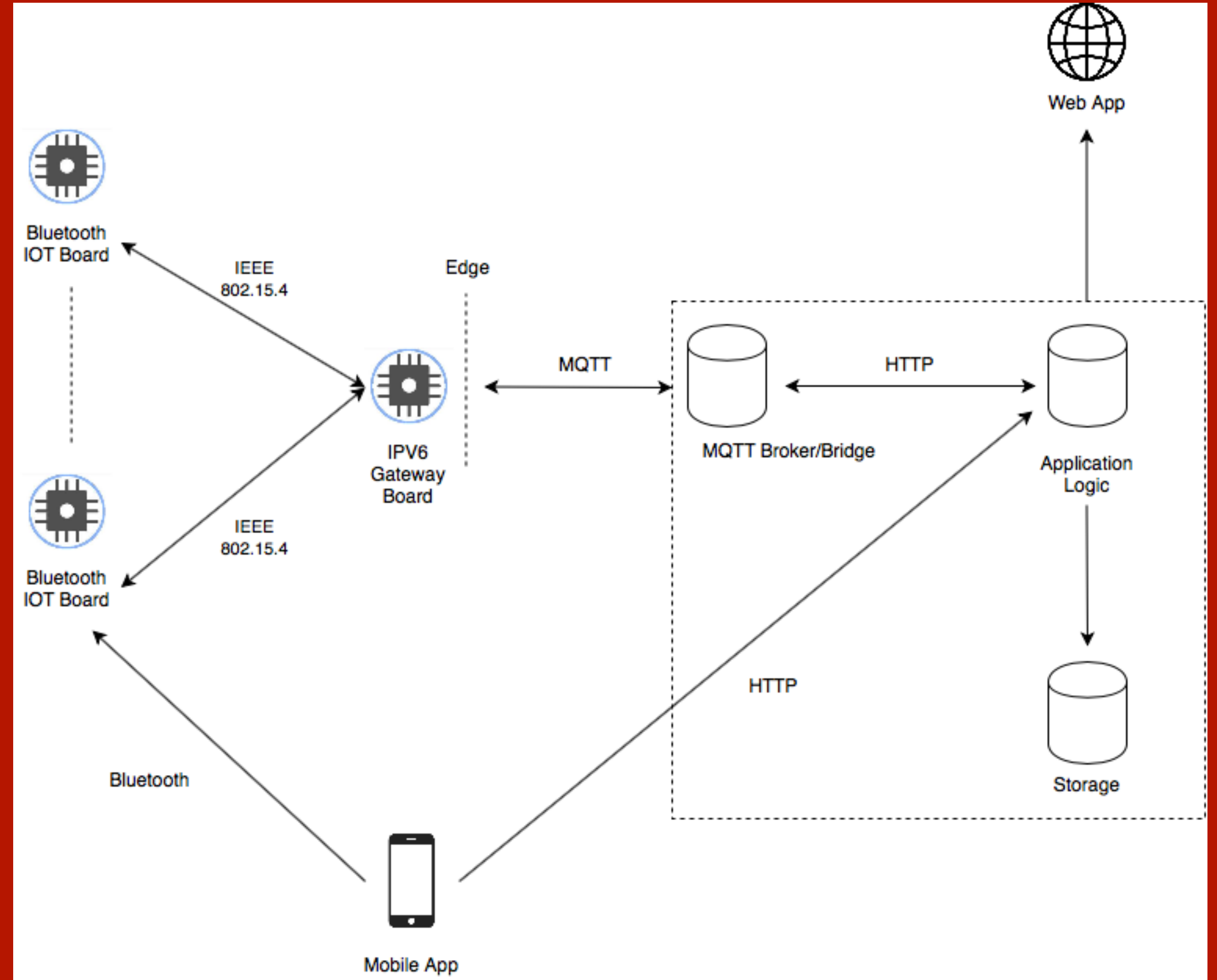
Sapienza 2020 IOT course

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The Architecture

Changed communication
protocol from COAP to MQTT



New feature – Opening hours

- The curators are now able to set the opening hours of the museum;
- This information will be sent to the boards;
- The boards will go into sleep mode when the museum closes and wake up when it opens.



Why still beacons?

Starting from the decision of not to change the goals of the project, that is:

- optimizing the layout of the museum in order to improve the visitor experience;
- offering an easy and interactive way to provide visitors with information about the artworks.

We analyzed all the technologies we could use, coming to the conclusion that Bluetooth beacons are the best choice.



Technical work done so far

- Set up of the cloud architecture: the data storage, the login microservice, the files storage and the server to host the Application Logic tier.
- The curator front-end application: set up of the project using the react framework, the login and signup process along with the first drafts of UI design.



Missing functionalities

- **Smartphone app**

- Recognizing beacon signal
- Showing information about the artwork
- Collecting data about the visit

- **Beacon board**

- Sending beacon signal
- Sleep/wake timer
- Sending "alive" message

- **Dashboard**

- Showing statistics about the visits
- Updating opening hours
- Showing boards status

