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# AIRCHAT

## App Development

"AirChat" is an app to send instant messages via Bluetooth. It saves users from the trouble of finding cellular networks and the internet.

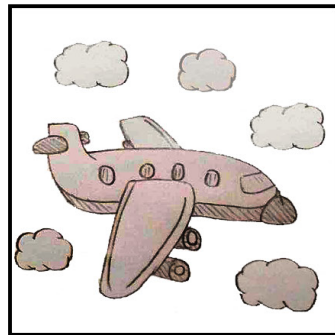
## Platform

Android 5.0 +

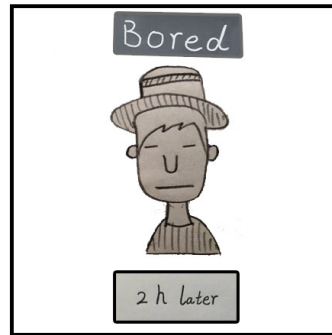
## Personal

# Storyboard + Analysis

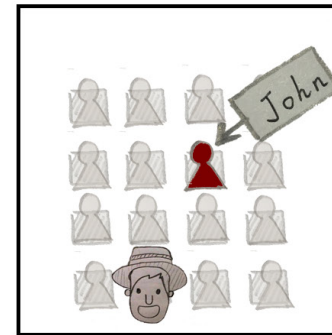
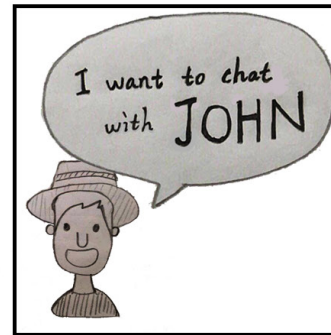
\* Need to follow the local airline policies



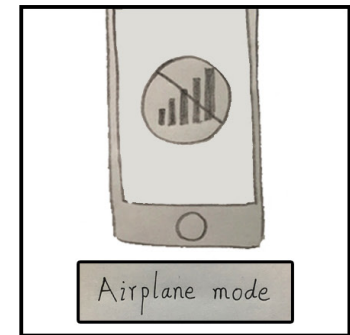
In flight



Peter feels bored



But it seems not easy to chat



If he can chat via mobile phone\*...



- ✓ Moderate effective distance (>100m)
- ✓ High security
- ✓ Low power consumption
- × Uncommon



- ✓ Common
- ✓ Long lasting connection
- ✓ High speed
- Limited effective distance (10m)

The most feasible solution

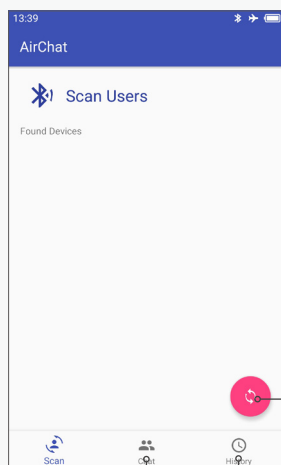


- ✓ Common
- ✓ Fast connection
- ✓ High security
- × Short effective distance (10cm)

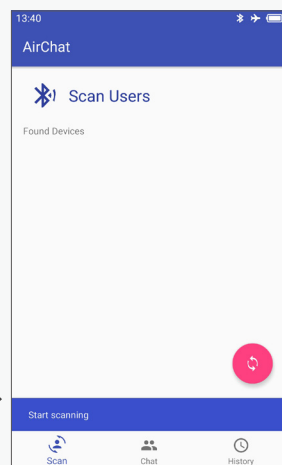
# User Experience Design

Scan → Pair → Chat

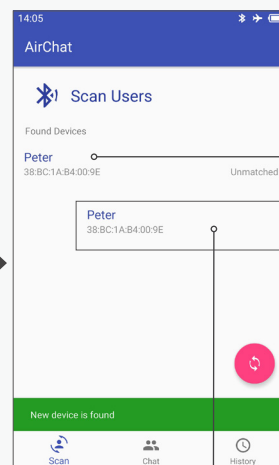
Scanning interface



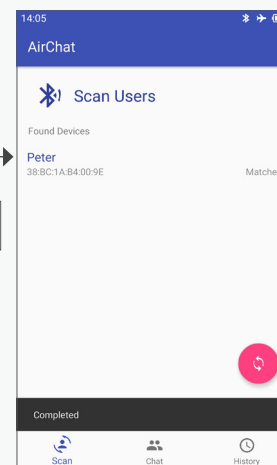
Scanning device



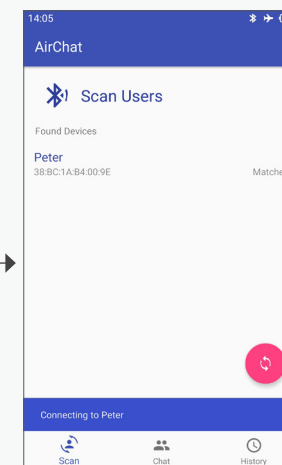
New device found



Pairing complete

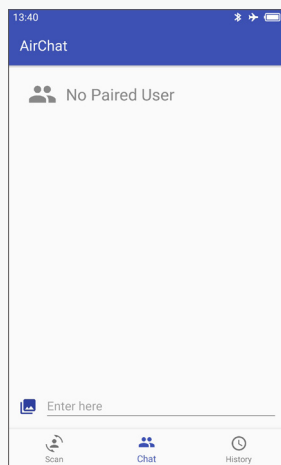


Connecting

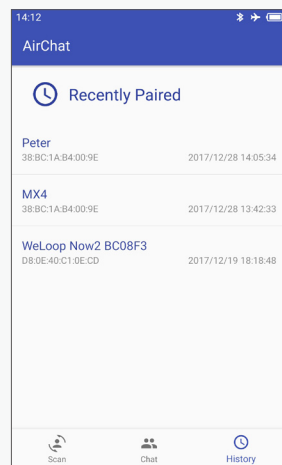


If the device has been paired, then connecting starts

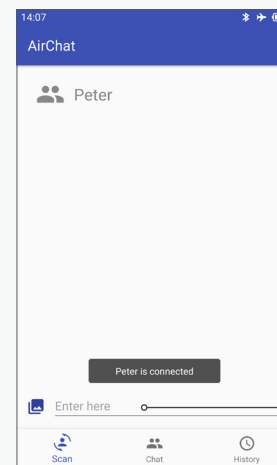
Chat interface (unpaired)



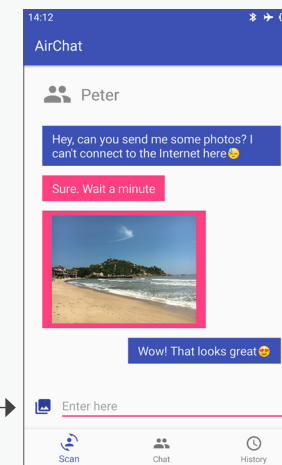
History interface



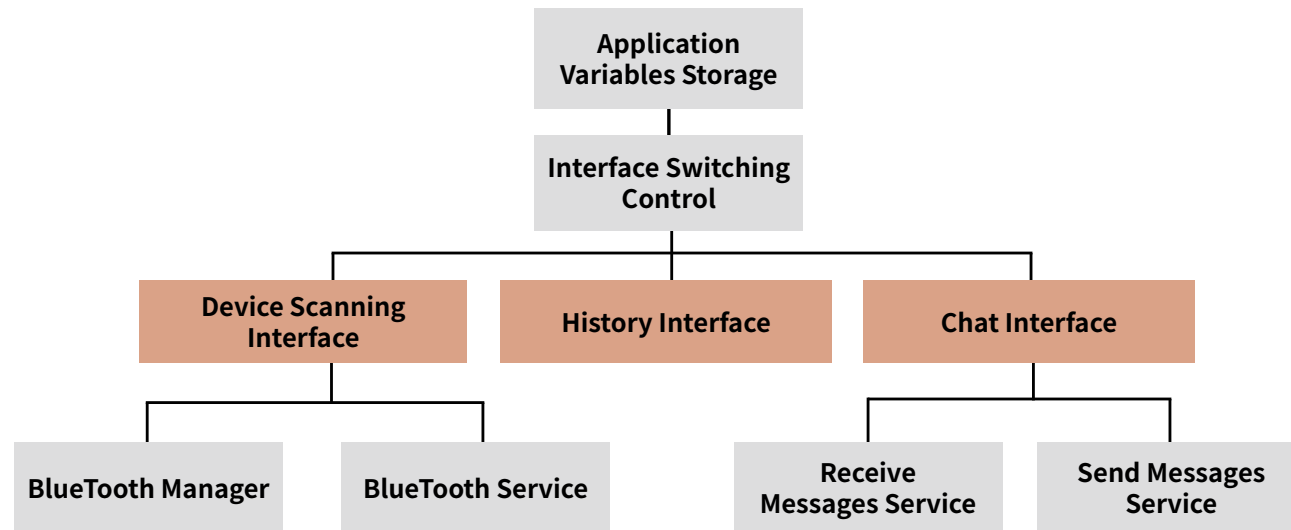
Chat interface (paired)



Send messages and pictures



# Development

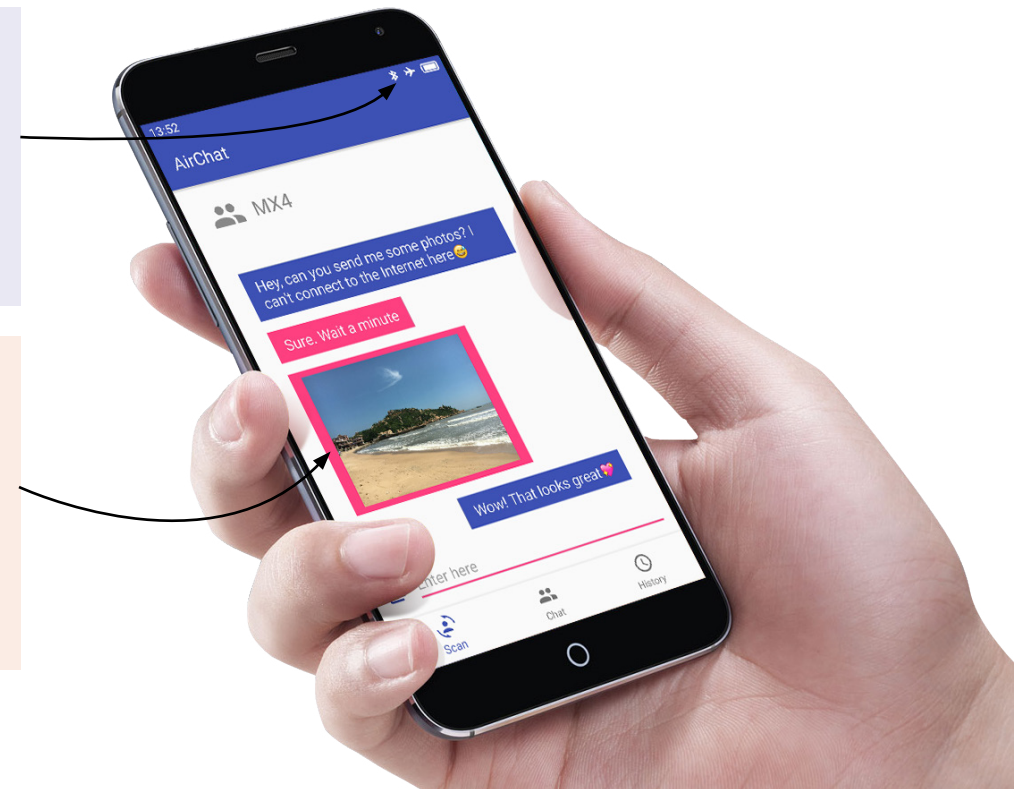


## ✱ Bluetooth Management

- Search for Bluetooth devices
- Pair with unpaired devices
- Create a Bluetooth server for communication
- Manage Bluetooth connection

## ✉ Message Management

- Handle the messages that need to be sent
- Display messages and store images
- Record picture transfer progress
- Process and classify the received data into text messages or image messages





## Review

AirChat facilitates instant messaging without network, but this solution is not perfect:

1. UX and UI designs of the app remain to be further optimized, such as hiding the chat interface when no devices connected.
2. The effective distance of Bluetooth is very limited. Even in Bluetooth 5.0, AirChat can only communicate within line-of-sight, which is still far from being a mature product.

