Android Interface-Firebird API

Group 2

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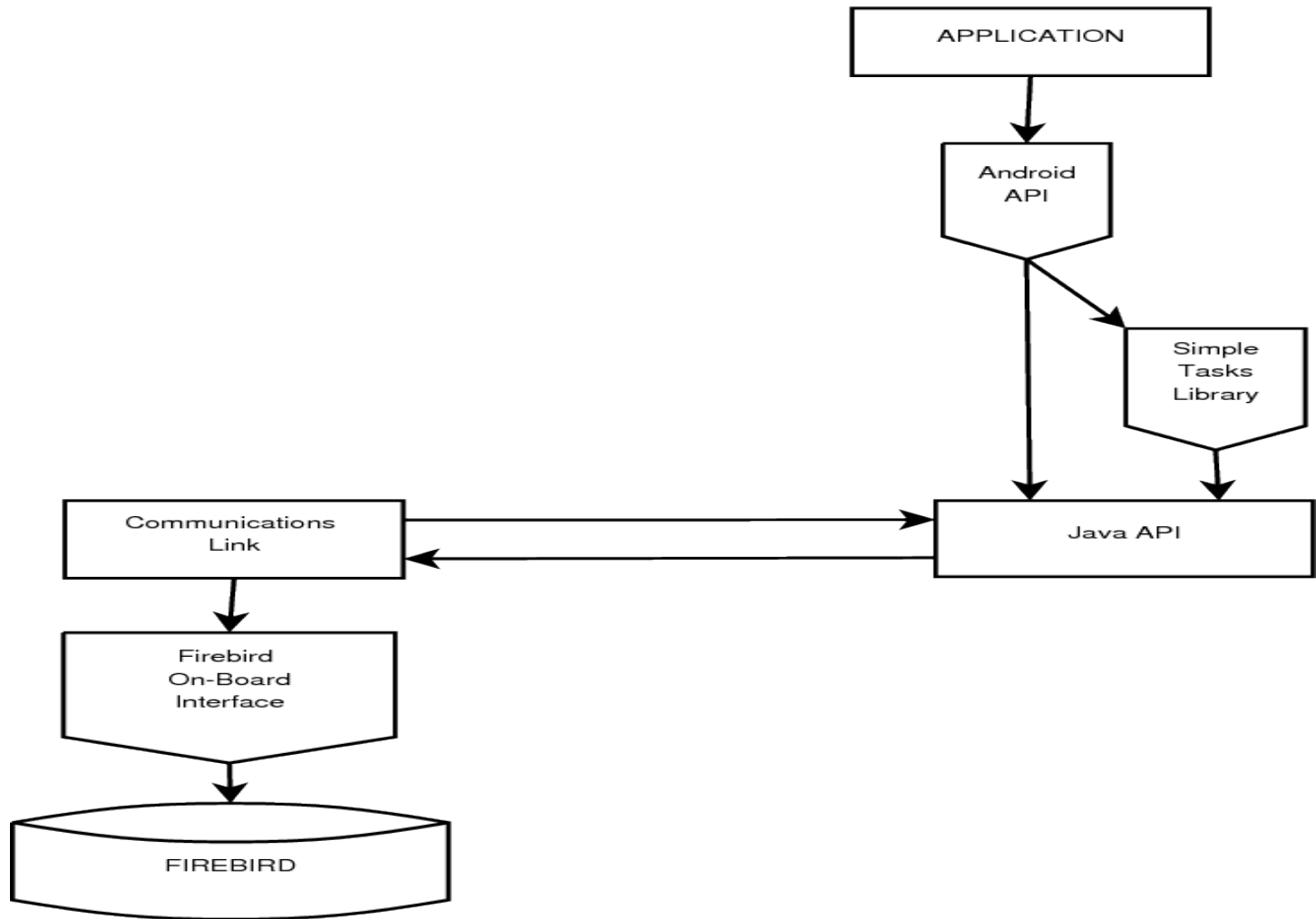
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The Idea

- Design a platform for building Android apps for controlling the Firebird bot.

- Provide a Java API to use all the functionalities of Firebird V.

- Provide a USB and/or Bluetooth communication interface between Android device and Firebird V.

Key Challenges

- Encapsulating features of Firebird V in a single interface.

- Synchronizing the communication between Firebird V and Android Phone.

- Providing an intuitive yet powerful interface for app developers.

- Providing interrupt processing functionality on the android phone over the communication interface.

Modules

Response

- Build over the pre-existing code for encapsulating the features of Firebird to suit our need.

- Design and implement a protocol to transfer data and control messages.

- Provide a Core Java API and Simple Task Library assuming different levels of developer expertise.

- Use Android-thread API to have a dedicated thread for servicing interrupts.

Additional Hardware

- An Android phone

- Bluetooth Communication module for Firebird V.

- USB interface for Firebird.

Where can we fail

- Slow communication speed may cause a deviation in the stipulated behavior due to various latencies.

- Interrupt handling may fail in complex scenarios.

- Porting the Java API to Android OS.