Exercise recommender system based on knowledge graph and knowledge modeling

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Overview

Introduction
- Background
- Basic Methodology

Knowledge graph
- Bluetooth Data Transmission

Security and Functionalities
- Security
- Functionalities

Background

The educational method of teaching students in accordance with their aptitude has a history of more than 2,000 years in our country, but in the context of our country's exam-oriented education, it is really easy to say that it is difficult to formulate a personalized learning plan based on students' different cognitive levels, learning abilities and their own qualities. When traditional thinking is combined with cutting-edge technology, the feasibility of teaching students in accordance with their aptitude has been greatly improved. After the intervention of AI, there are two ways to achieve personalized learning.

Basic Methodology

- Analyze content and build a knowledge graph
- Adaptive learning to realize intelligent recommendation

Knowledge graph

Figure: KG research fields

Literature review

- Knowledge Representation, Acquisition and Applications[1]
- □ □ □ □ □ □ Mask Token□ □ □ □ Entity□ □ □ Phase□ □ []

Bluetooth Data Transmission

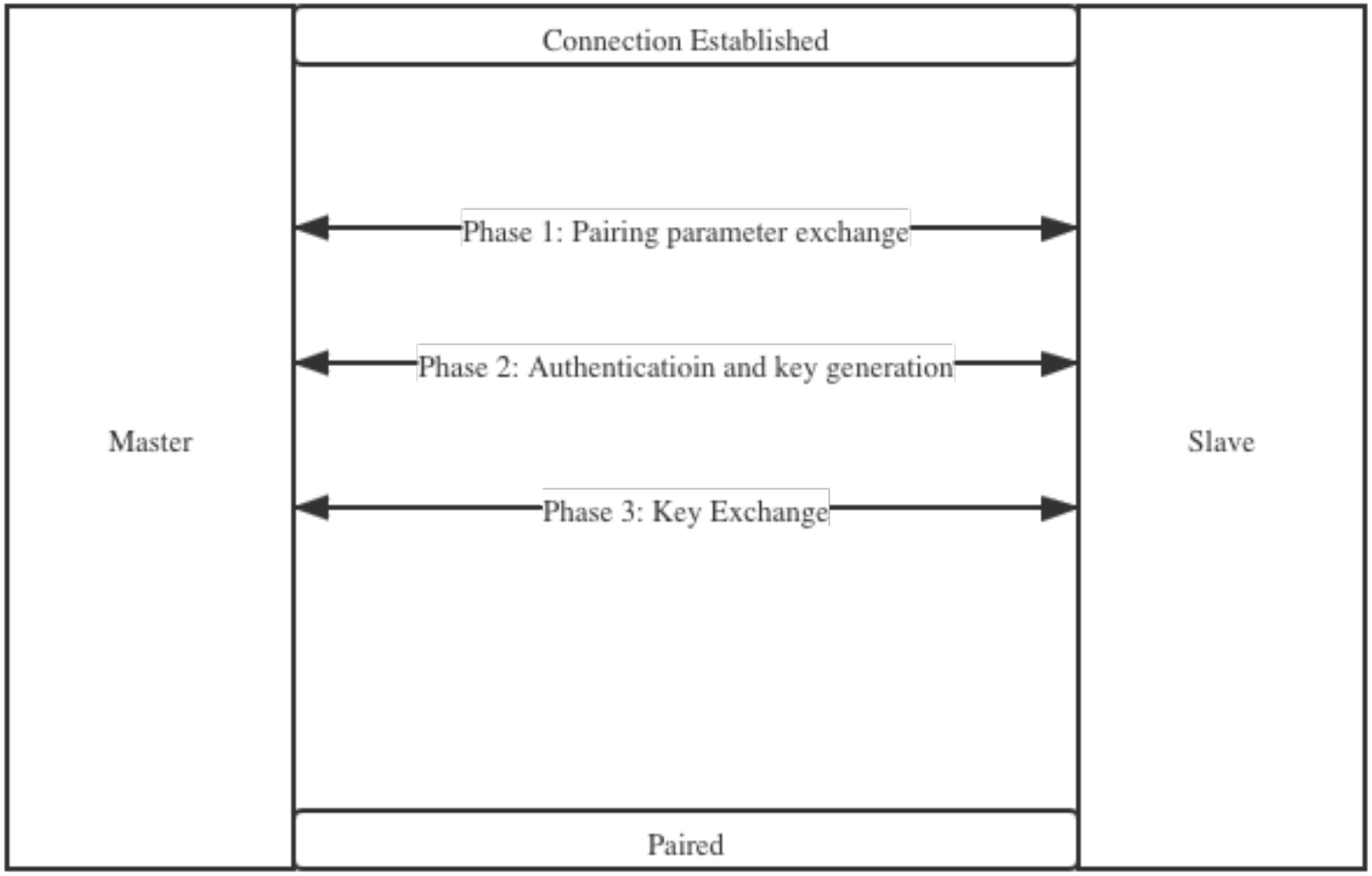

Figure: Bluetooth Data transmission

Security

- Only infector’s Periodic Rolling Exposure Key will upload to the cloud server
- The encrypted metadata cannot be decrypted without PREK
- Client-to-client communication is based on authenticated Bluetooth data transmission

Functionalities

- Data statistics is possible as the register data can be collected.
- Location and time windows of infected can be tracing.

References I

Ji, S., Pan, S., Cambria, E., Marttinen, P., & Yu, P. S. (2020).

A survey on knowledge graphs: Representation, acquisition and applications.

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