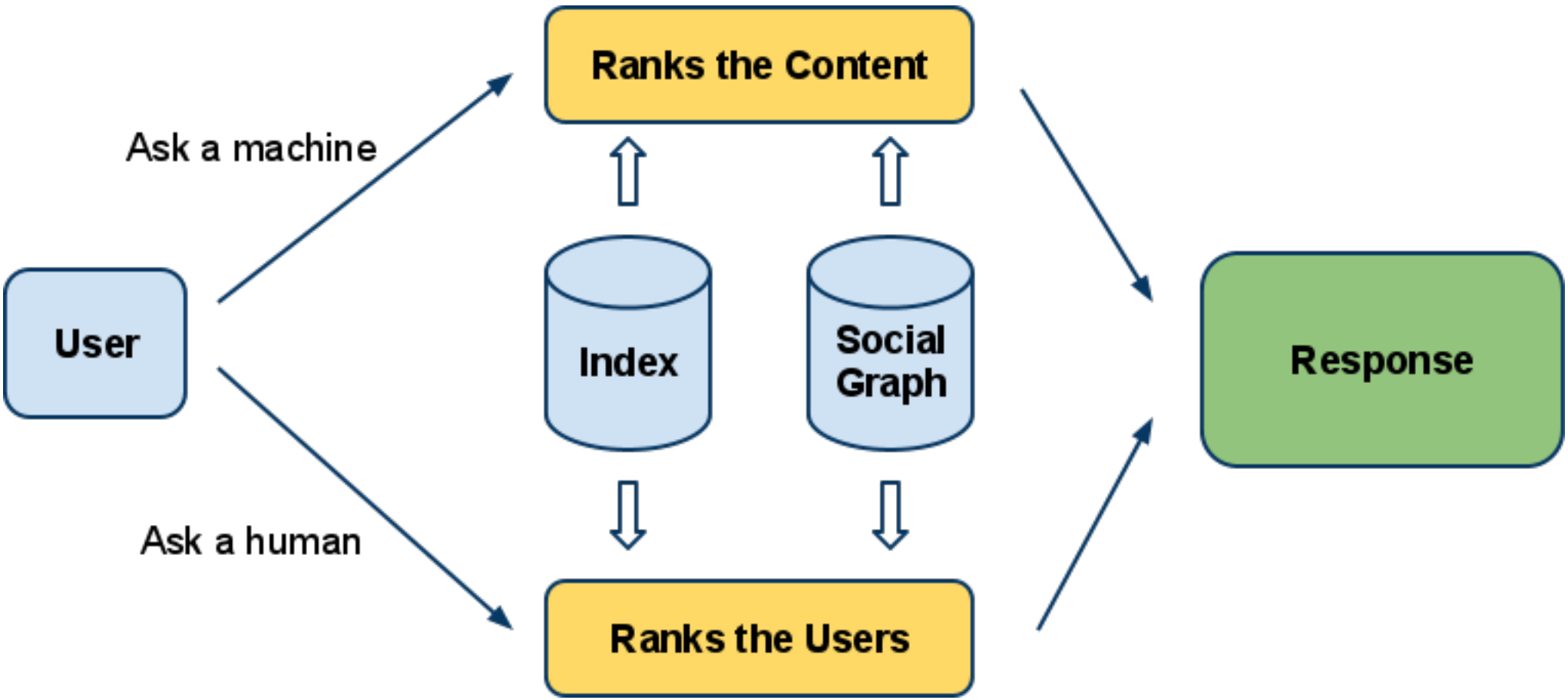
Social Search

R&D North

THE BIG PICTURE



Zing: User Behavior Analysis

User interests: *networking*

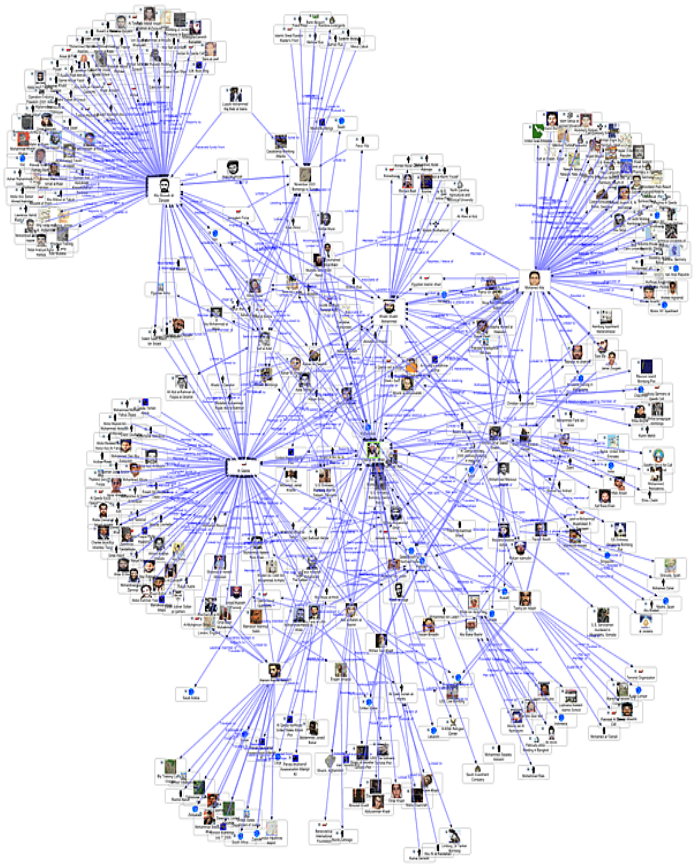
- Find old friends
- Find friend with mutual interests
- Find game play friends
- Find friend within group
- Find friend around a location

Problems

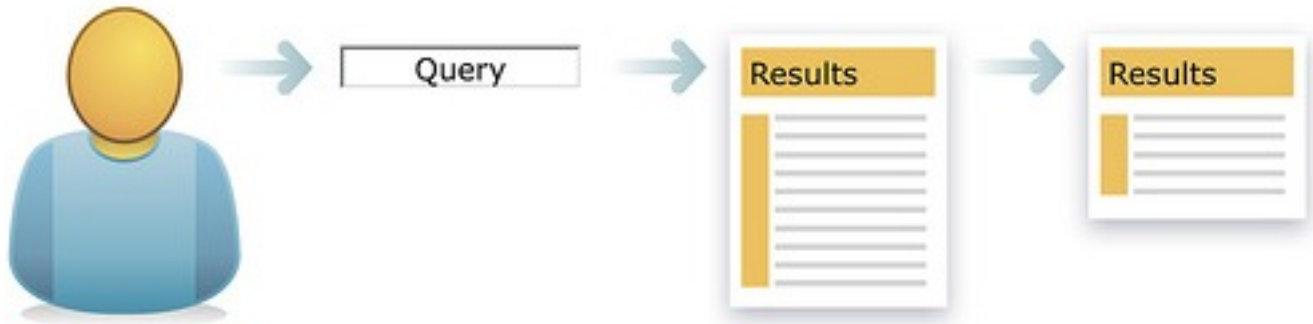
Result is **not relevant** to user's network.

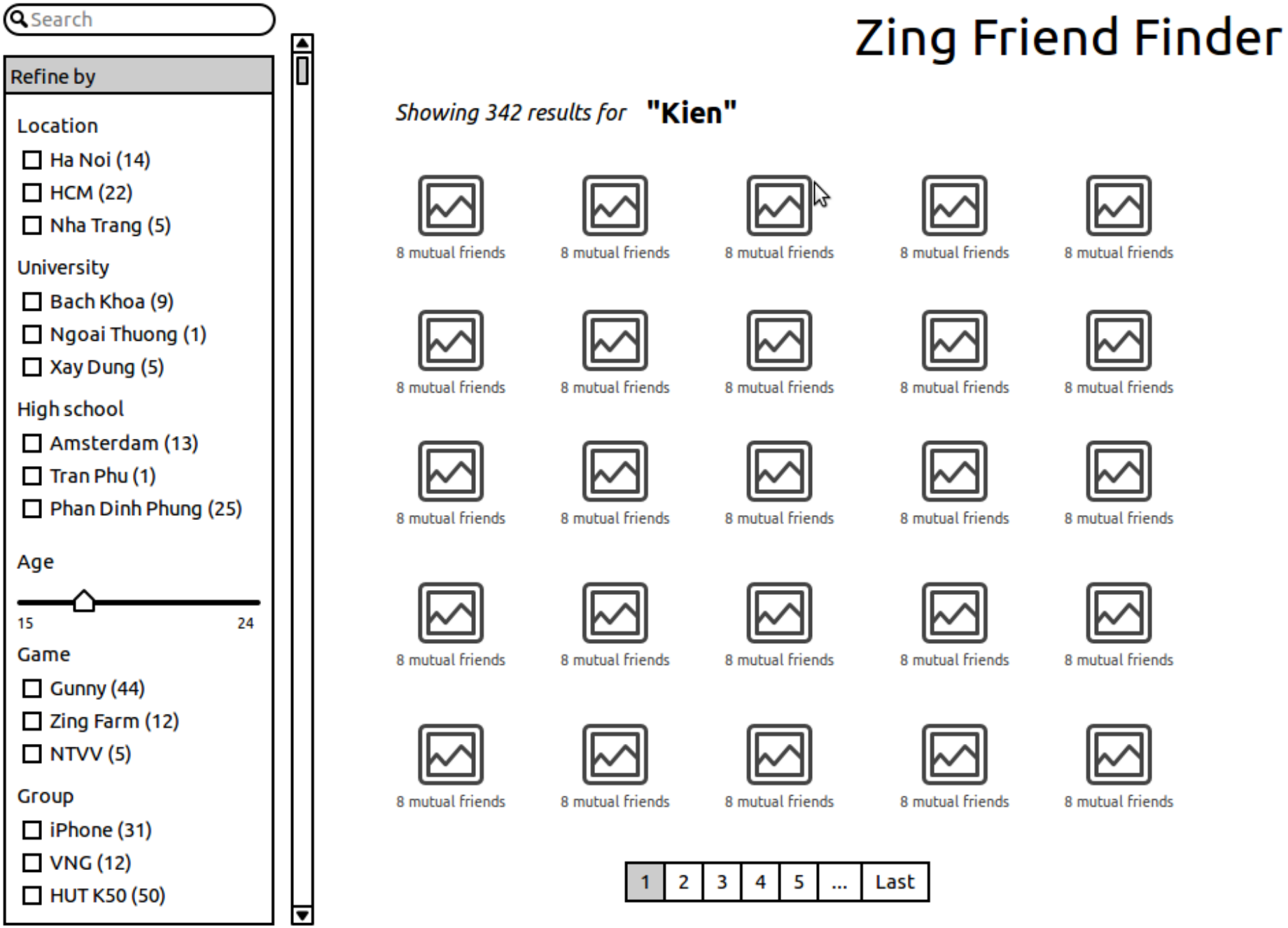
Browsing **thousands of results** is a pain.

Solution



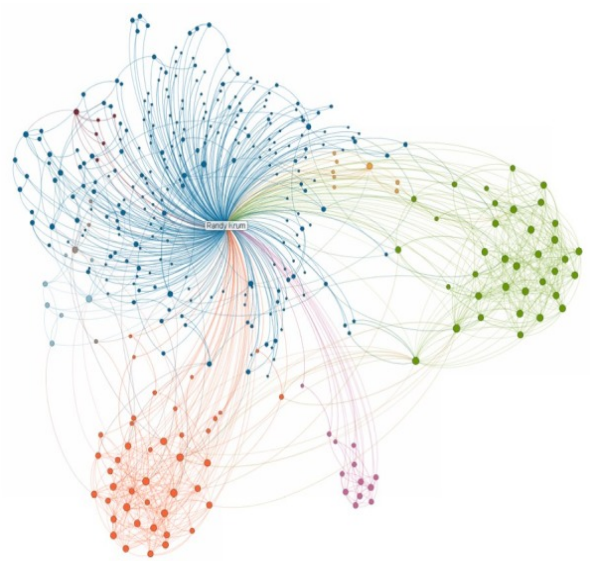
Social Search + Faceted Navigation





First prototype

BIG DATA



26 avg friend/user

30.000 avg friends of friends/user

800.000 maximum friends of friends/user

17,000,000 users in index*

* test index

STRICT SLA

Worst case: **1s (1000ms) / request.**

CHALLENGES

Check relationship

Ranking user's affinity

ONLINE

CHALLENGES

Example:
User A executes a query: "*Nam*" => **500,000 hits**
Social search: check each hit's relationship with user A.

500,000 * 0,1ms = 50s!!

BOTTLENECK!

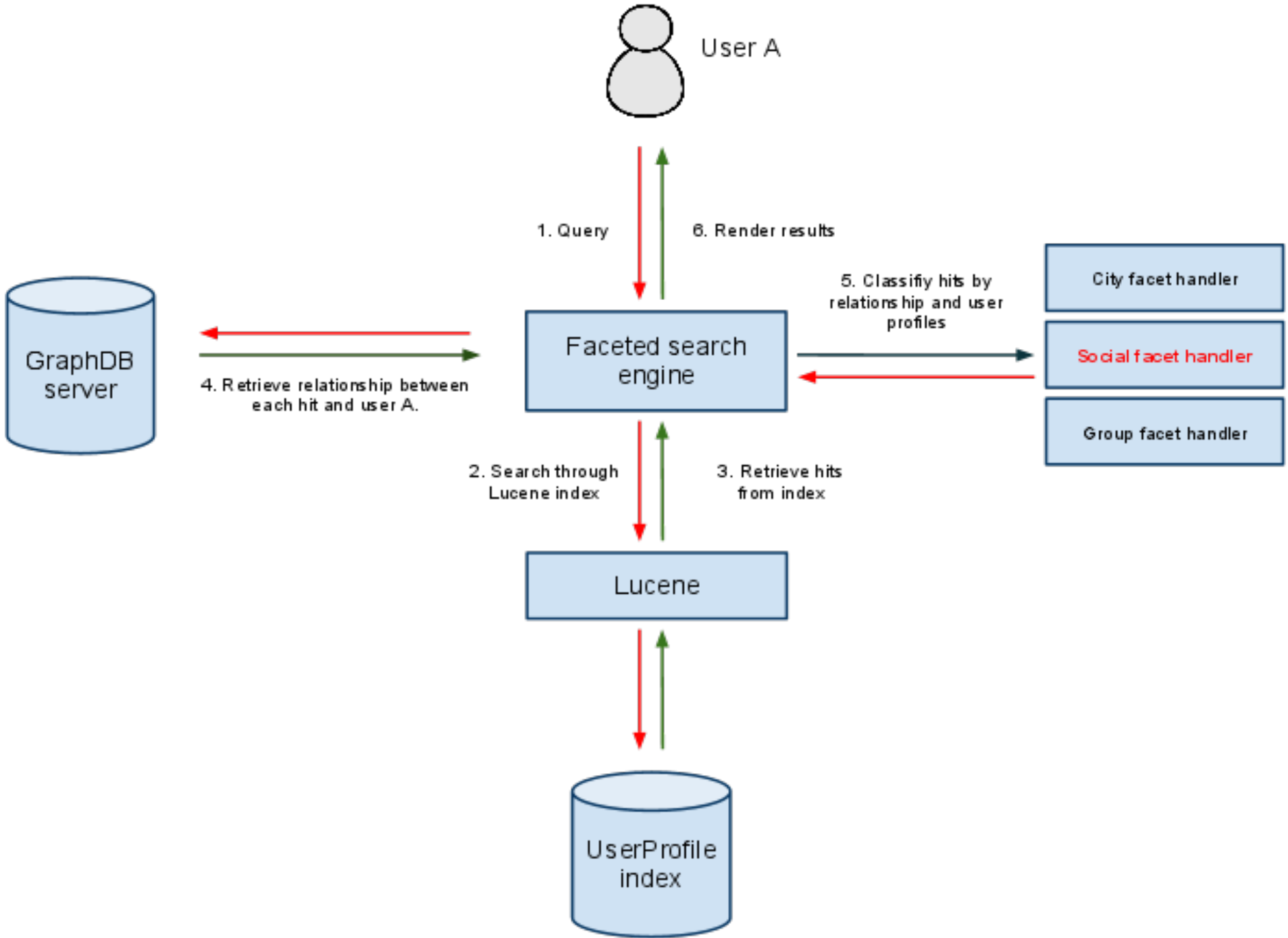
Solution

Built a **fast**, **memory-efficient** graph database.

Built a **social facet handler**.

Trade off results: use bitset / filter.

SYSTEM MODEL



PERFORMANCE EVALUATION

1. User's query

- **Simple query: "Kiên"**
  - **200-300ms => FAST.**

- **Complex query: "Phạm OR Kiên"**
  - **More hits => slow.**

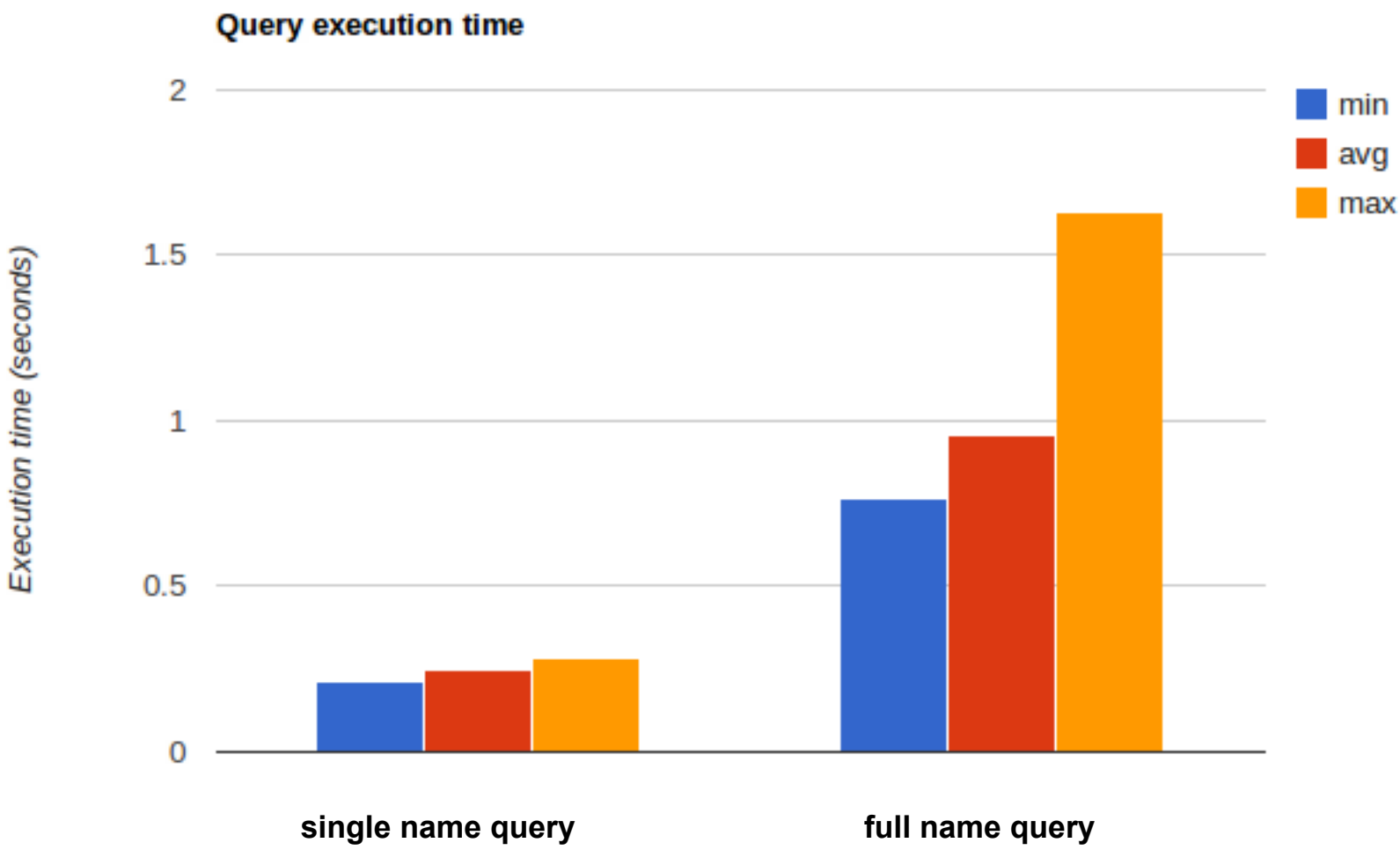
2. Facet

- All facets is selected => slow.

3. User's network

- More friends => more hits => slow.

EXPERIMENTAL RESULTS



DISCUSSIONS