Mobile applications

Laurence Tratt
http://tratt.net/laurie/

Middlesex University and Elbatrop Ltd.

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Outline

1. My background.
2. Mobile apps background.
3. Creating a small app.
4. Some real apps.
5. Filthy lucre.

Who is he?

- Main job: Senior Lecturer at Middlesex University.
- Research interests: programming languages (see Converge).
- Find more at http://tratt.net/laurie/.

Elbatrop

- Elbatrop Ltd., a small start-up focusing on mobile applications.
- Founded in London July 2009.
- I'm a co-Director.
- So far: 7 iPhone apps released (inc. a top #300 UK app); 1 Android app.

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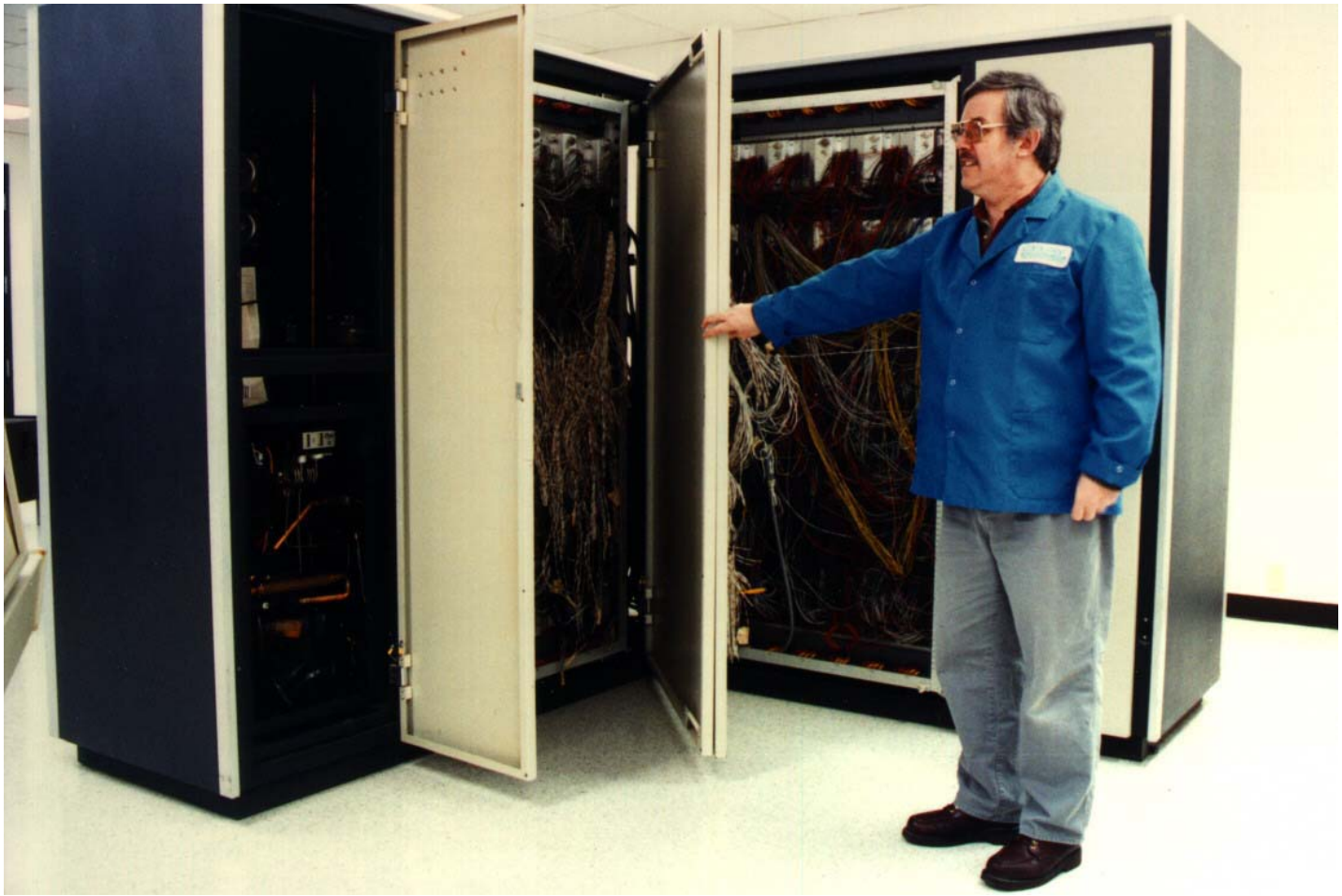
- Why are we only now talking about mobile apps?

Why are we only now talking about mobile apps? (1)



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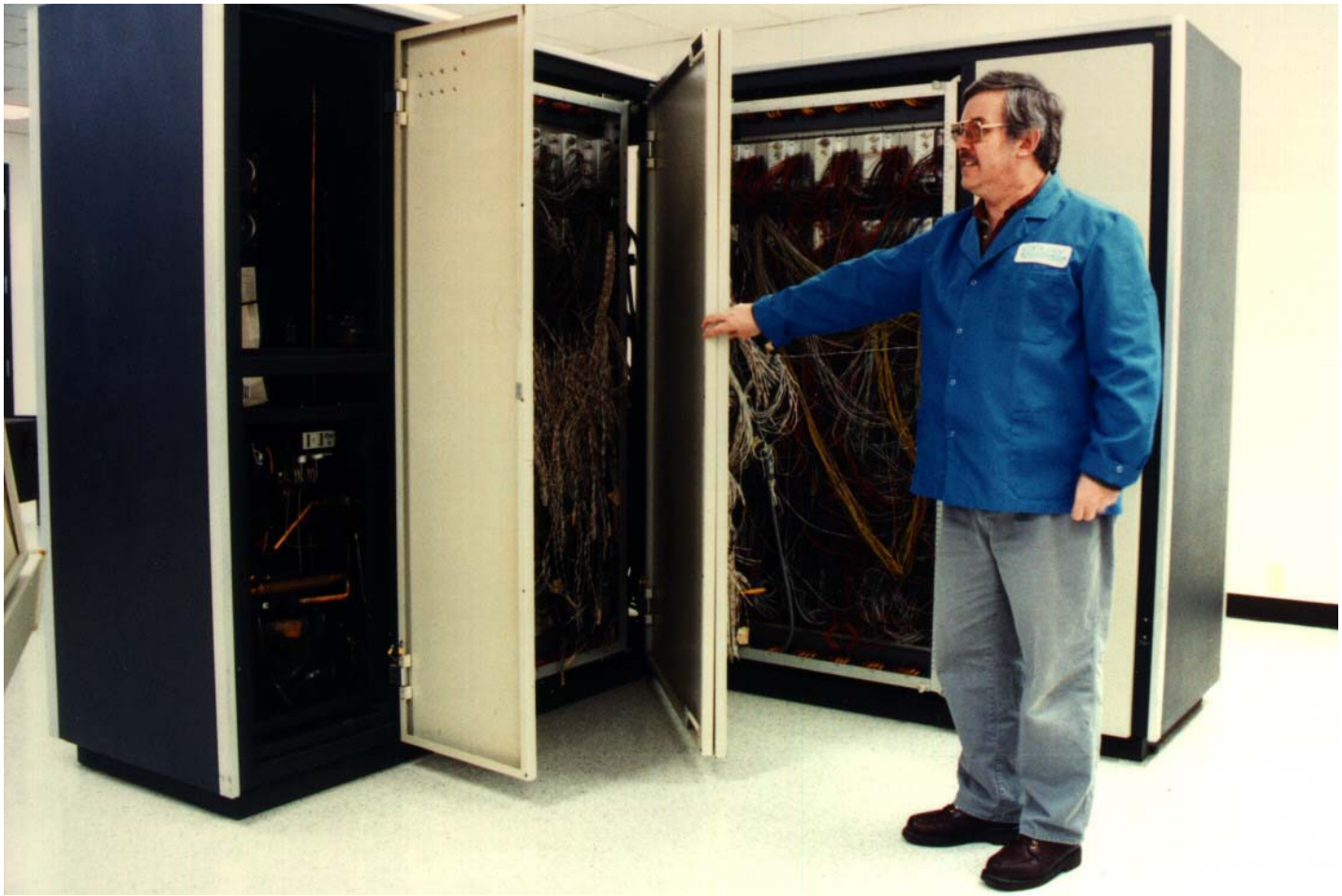

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CDC 6600, circa 1965, 10 MIPS

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Samsung D900, circa 2006, processor $\approx$ 100 MIPS

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Google Nexus One, 2010, SnapDragon Arm processor $\approx$ 1000 MIPS

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- Computing primordial soup!

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- Feb 2010 #apps: Apple 150,000; Android 20,000; Nokia 6,000; Blackberry 5,000.
- Summary: only Apple and Android currently count...
- ...so we'll concentrate on them.

iPhone development

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- [...so it's a cut-down Unix...]

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- which must be programmed in Objective-C...
- using the iPhone libraries...

A test app

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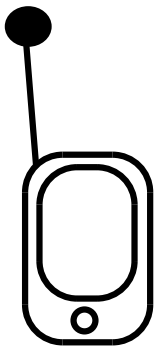
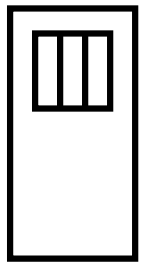
- [If you want to charge, you need a business bank account.]
- Upload with description and screenshots.
- You’re done.

A real app

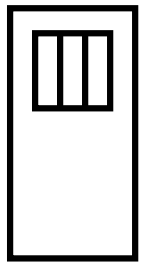
How does it work?



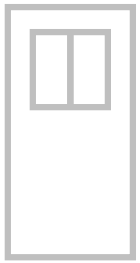
Phone



Server #1



Server #2



DB server

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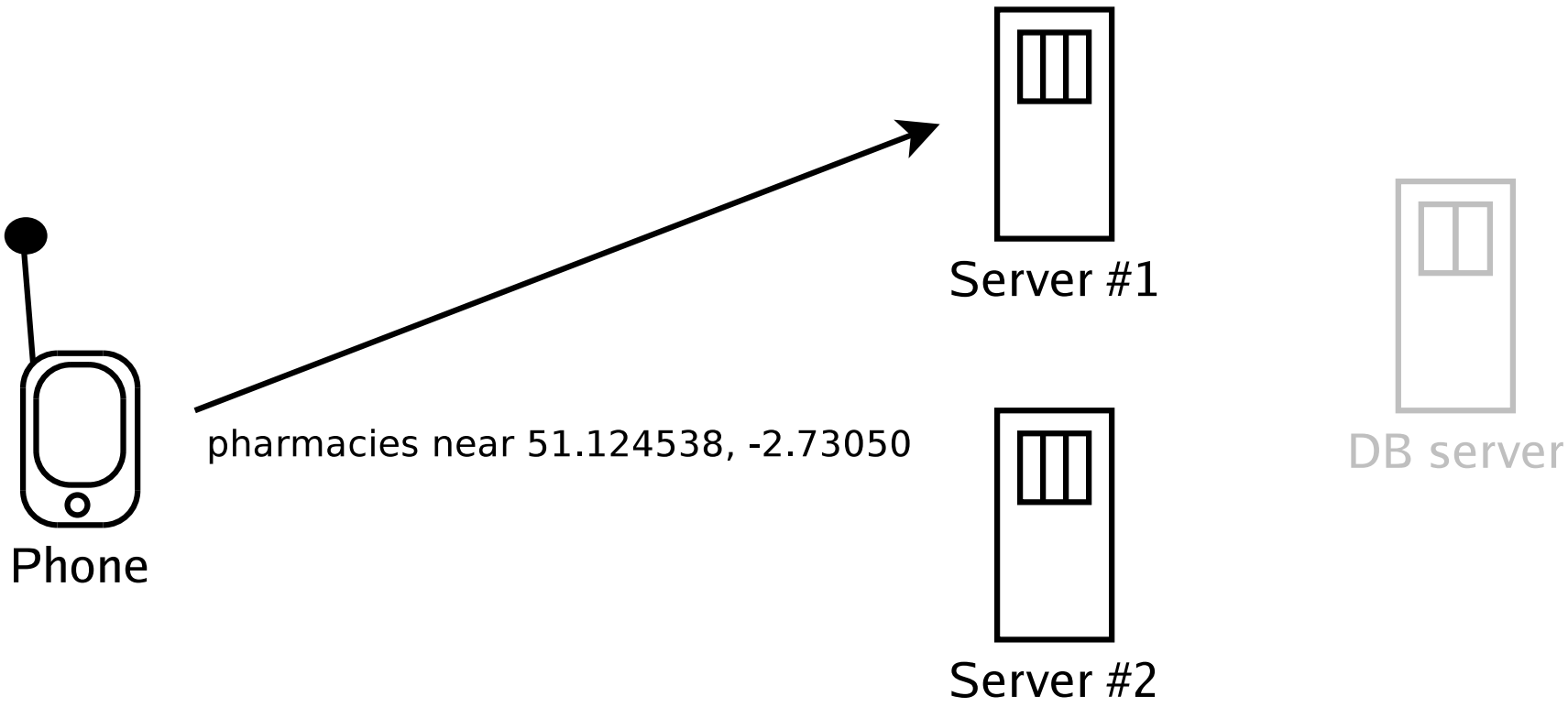

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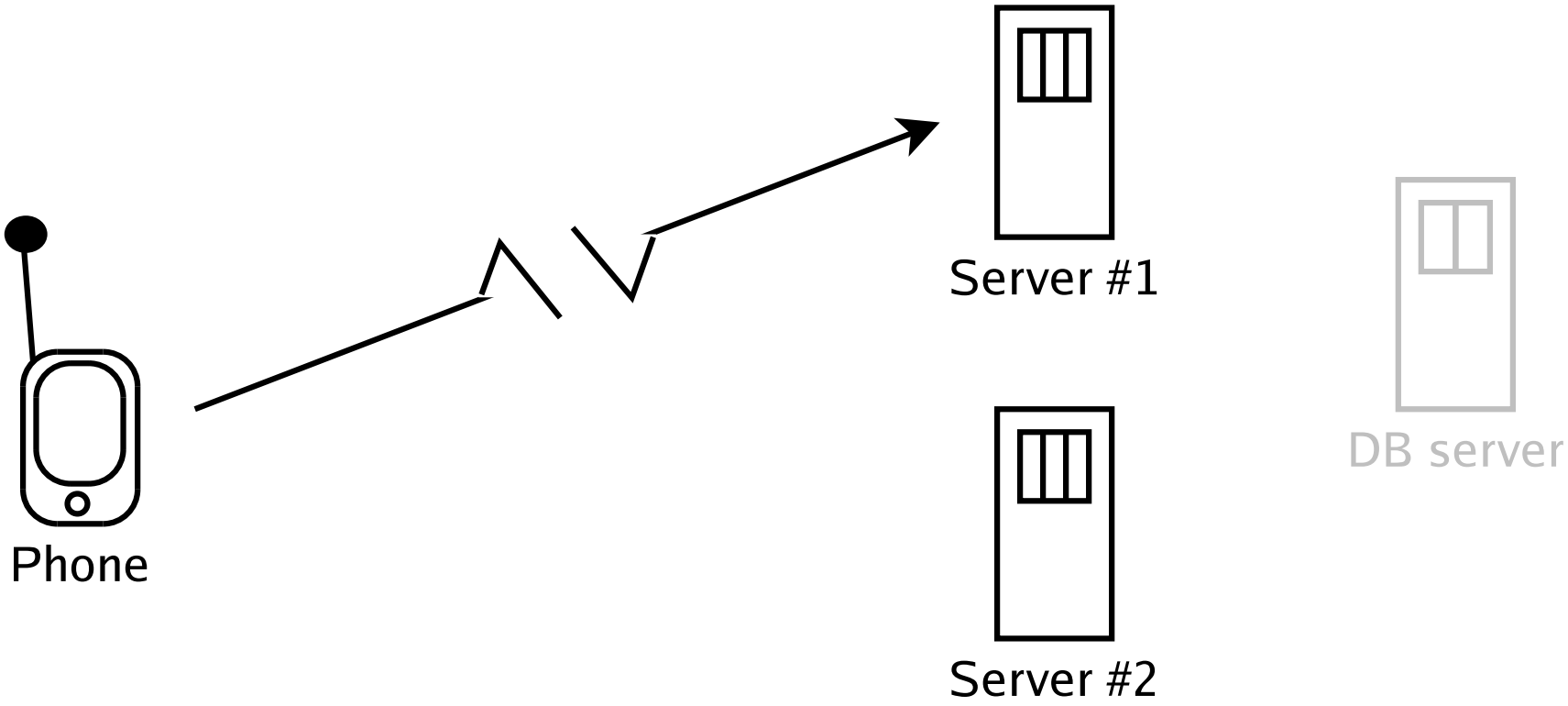

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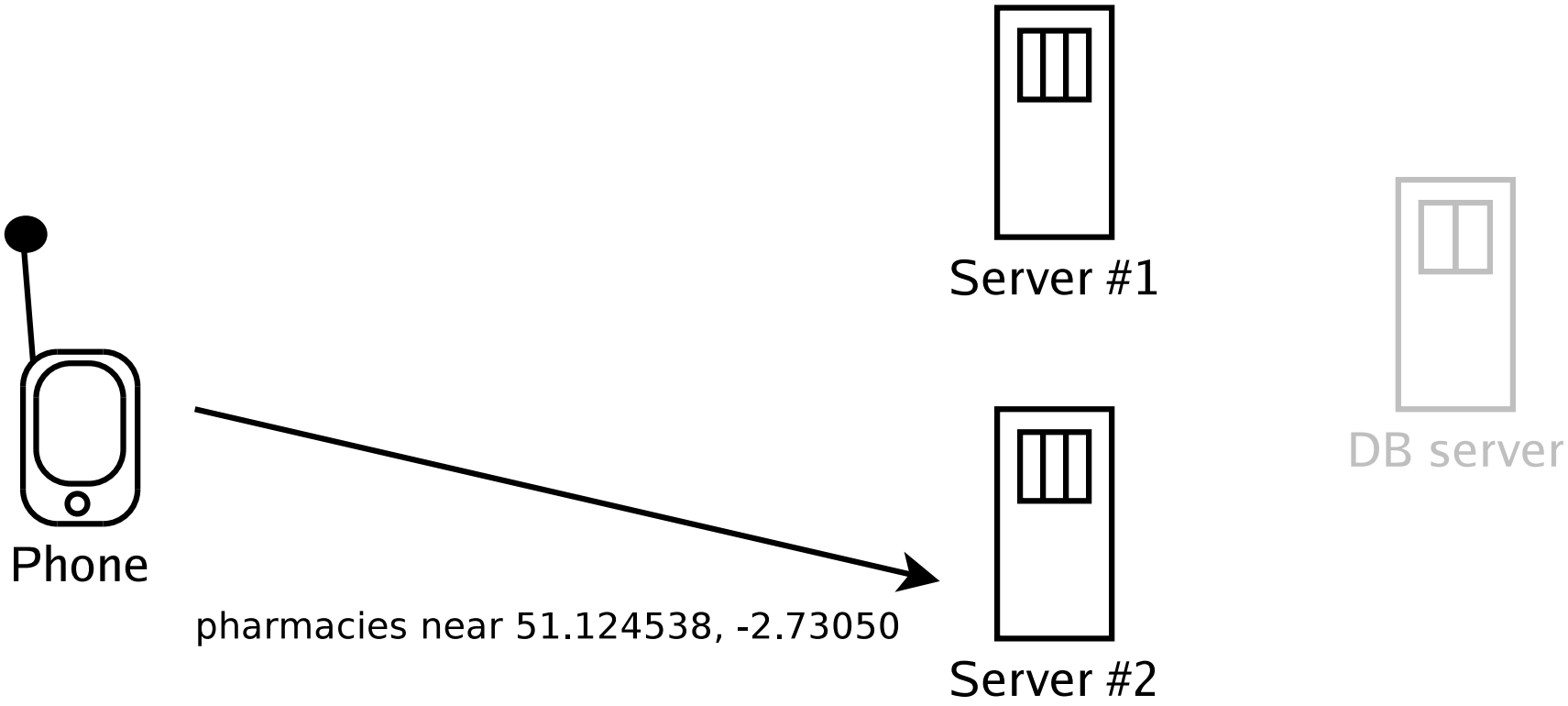

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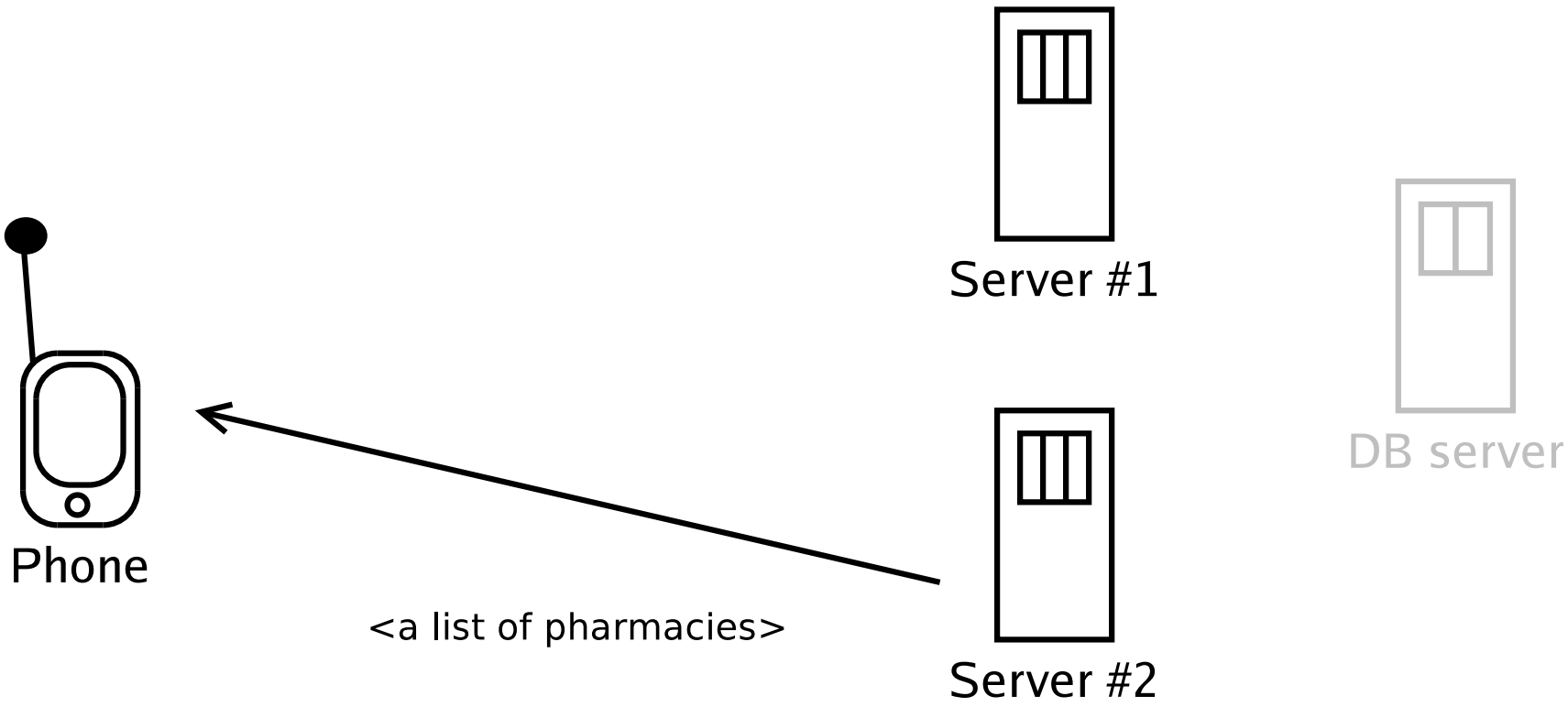

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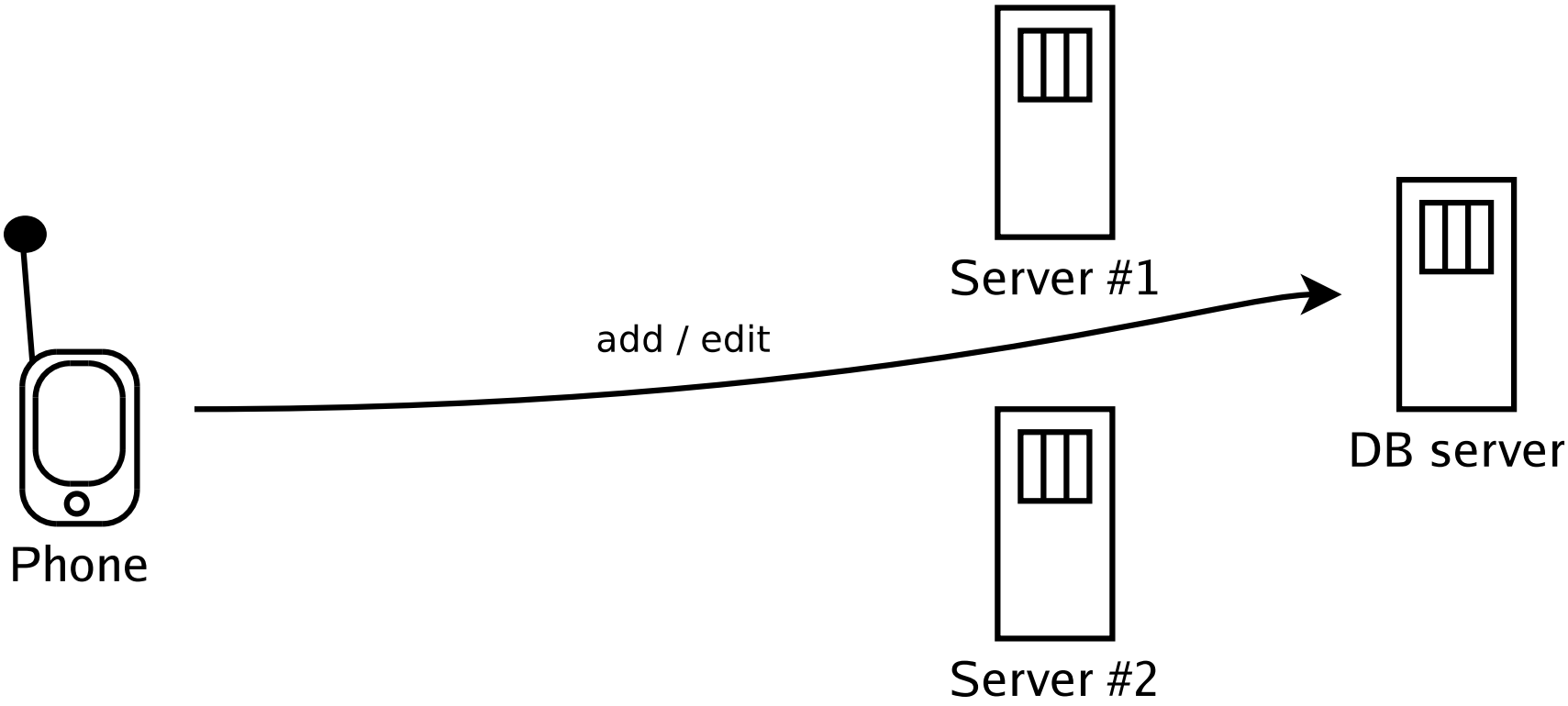

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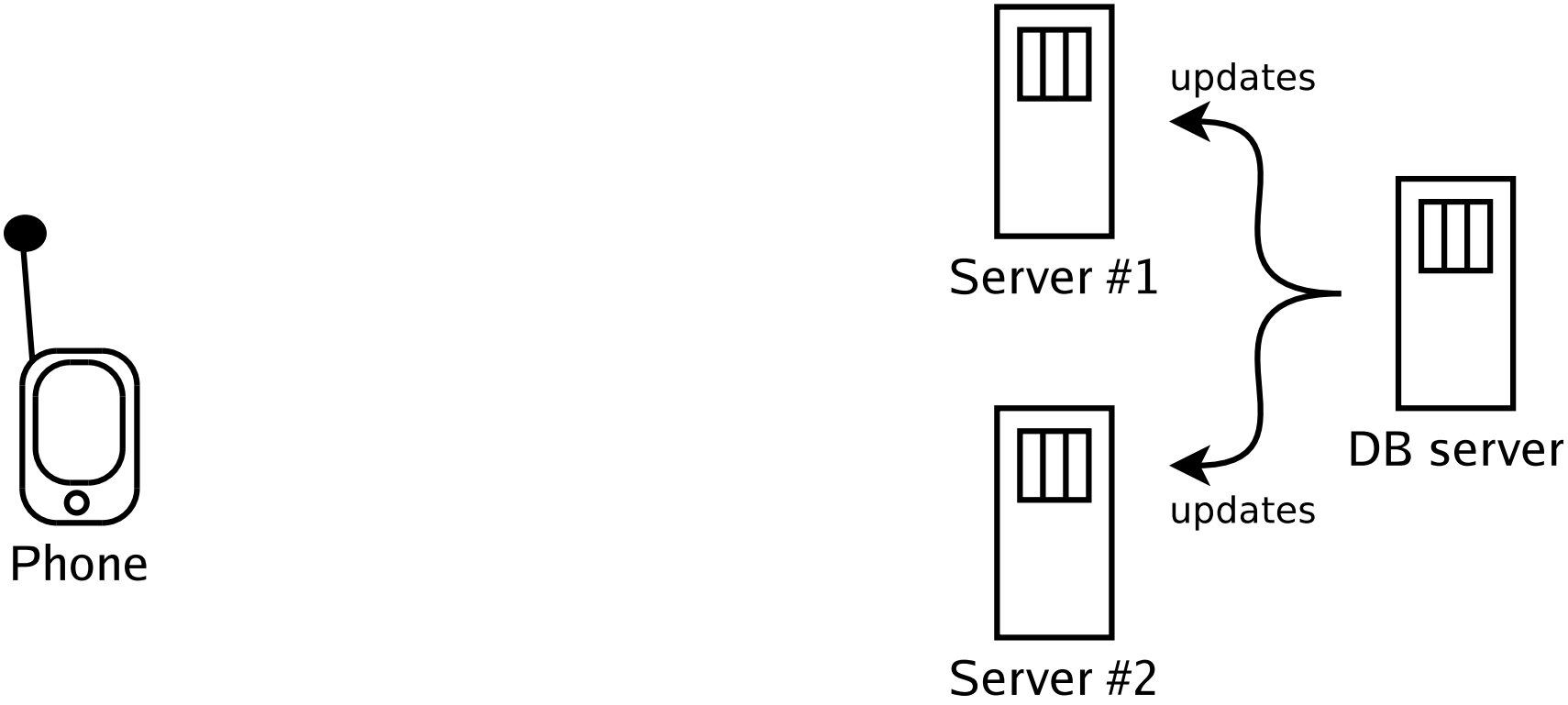

What's in a server?

- In this case, OpenBSD servers.
- Running (mostly) Python and (a few) PHP programs serving data and processing updates.
- No single point of failure server for critical aspects.

Can you do it for Android too?

- Android runs Linux at the lower level.
- And a big Java system on top.

What does it take?

- All in all, about 8000LoC.
- A wide range of skills used:
  - programming (Objective-C, Java, Python, PHP, Unix shell).
  - databases (for updates).
  - HCI issues (for the UI).
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  - etc.

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  - etc.
- Which a good computing course will prepare you for.

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- Roughly: Android development is 2-3x as easy as iPhone.

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  - position 100: 1 sales/day
  - position 75: 3 sales/day
  - position 50: 5-10 sales/day
  - position 15: 30 sales/day
  - position 10: 40 sales/day
  - position 8: 60 sales/day
  - position 6: 80 sales/day
  - position 5: 100 sales/day
- Success begets success; so most apps are invisible.

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- Disadvantage: relatively fewer users.

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- What will happen in the future?

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- Can make money, but don't expect to get rich.
- A great way to get into computing!