

SOMA - A Service-Oriented Mobile Learning Architecture

Magisterstudium:
Informatikmanagement

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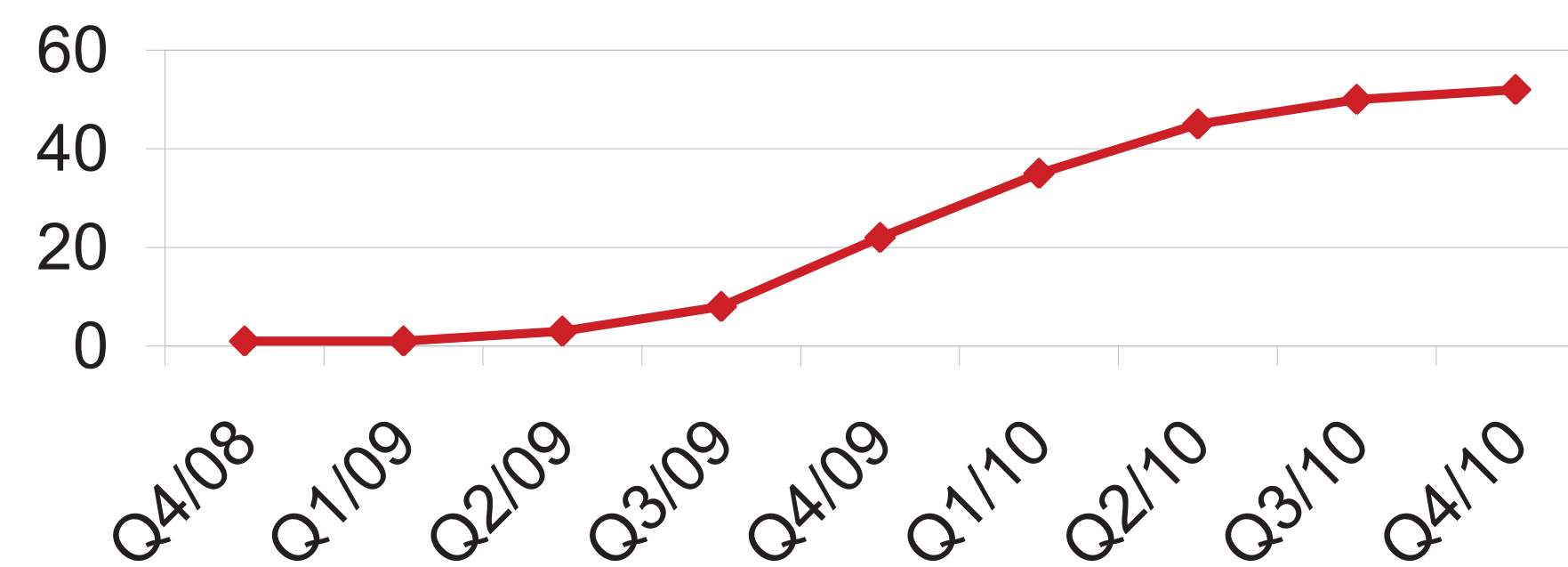
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Mitwirkung: Projektass. Mag. Dr. Philipp Liegl

Motivation and problem statement

State-of-the-art solutions are

- Mostly interrogator-responder based
- Repetitive
- Not exciting
- Not available for smartphones

Build a next-generation mobile learning environment based on Google Android



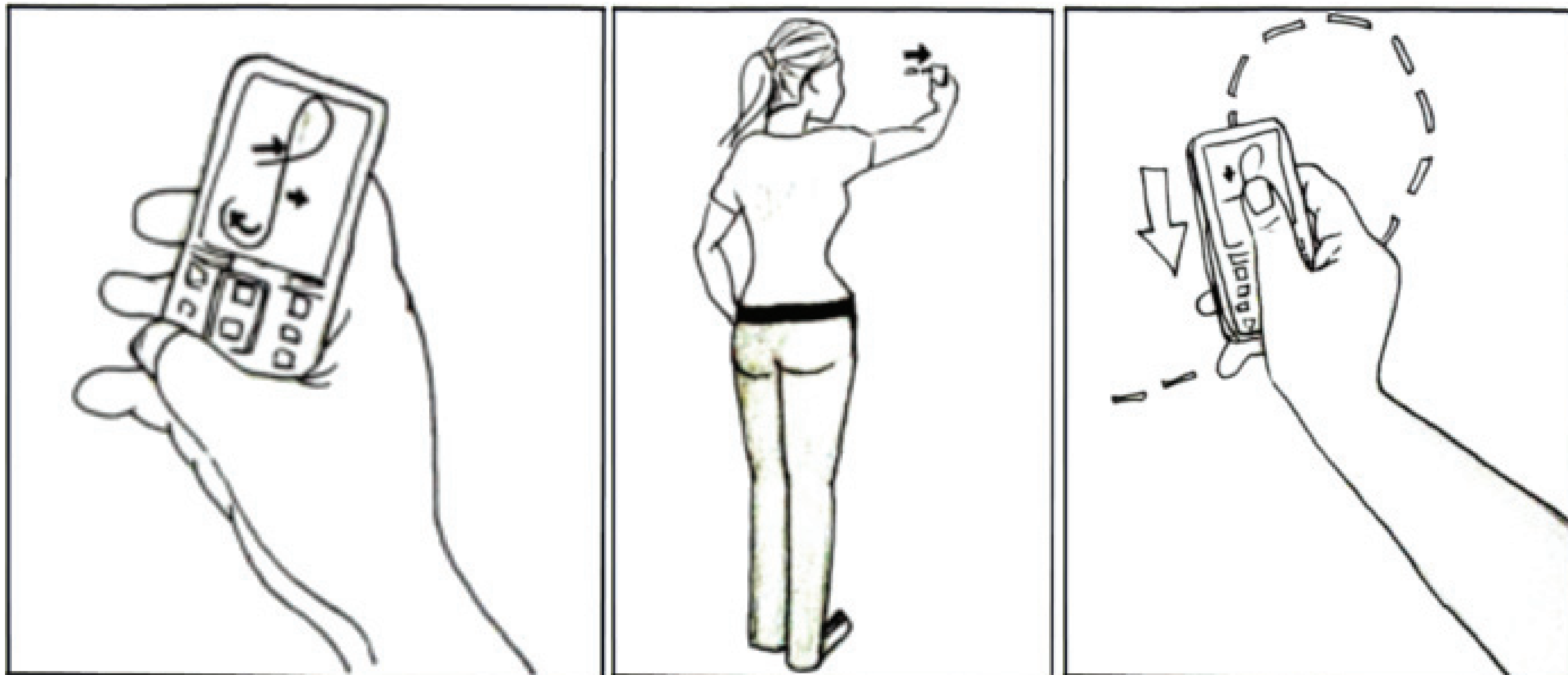
- Mobile operating system released in 2008
- Constantly increasing number of devices
- Java runtime compatible with version 1.6
- Sophisticated SDK for third party applications



Approach

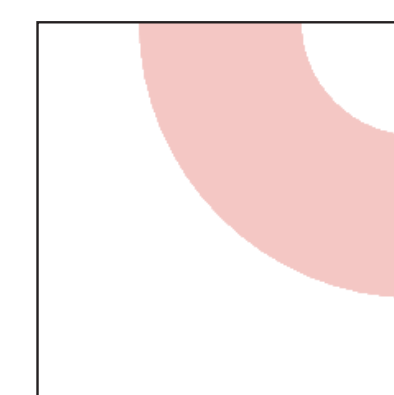
Interactive e-learning for mobile devices

- Allow the execution of interesting, exciting e-learning courses
- Take advantage of modern hardware features such as cameras
- Use different input techniques
- Collectively form a variable and interesting learning experience



Integration of e-learning with social networks

- Users can publish their learning results on social networks
- Learners are encouraged to discuss content with other students
- Motivation through competition between connected students



Andreas Kuntner hat den SOMA-Kurs „Erste Hilfe Basis-kurs“ absolviert und 85% der Fragen richtig beantwortet!
Samstag um 15:51 · Kommentieren · Gefällt mir
[Auch an diesem Kurs teilnehmen](#) · [Andere SOMA-Kurse herunterladen...](#)

Fabian Kromer gefällt das

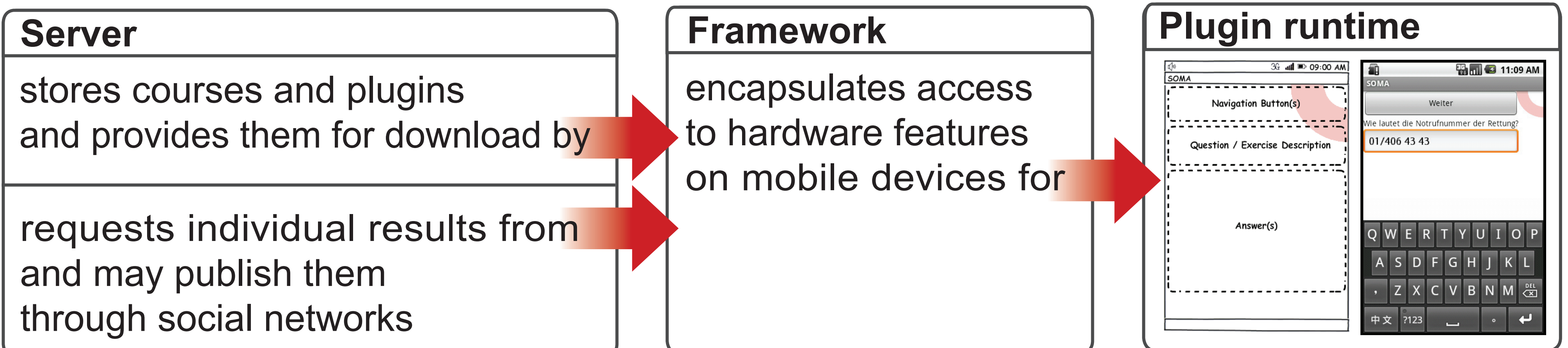
Methodology and results

A platform for course suppliers

- Exercises use plugins to present content
- Courses are encoded in XML

```
<course guid="EHFragenkatalog2010" title="Erste Hilfe"
description="Fragenkatalog 2010">
<chapter id="1" name="Kapitel 1">
<exercise id="1" plugin="soma.PLUGIN.MultipleChoice">
<Question text="Wer war der Gründer des Roten Kreuzes?"/>
<Answer text="Henry Dunant" correct="true"/>
<Answer text="Theodor Körner" correct="false"/>
<Answer text="Florence Nightingale" correct="false"/>
</exercise>
<topic id="1" plugin="soma.PLUGIN.MultipleChoice">
<Info text="Vorbereitung für die Prüfung am Landeslager"/>
<Info text="Es können immer mehrere Antworten richtig sein!">
<Pause duration="3000"/>
</topic>
</chapter>
</course>
```

A framework for developers of e-learning solutions



A prototype for evaluating how interactive e-learning can enhance the learning progress

