

ALICE Connex

Mobile Volunteer Computing and Edutainment Platform

Gantaphon Chalumporn

Advisor: Dr.Tiranee Achalakul Supervisor: Filippo Costa
Computer Engineering

King Mongkut's University of Technology Thonburi, Thailand

ALICE Connex

Mobile Volunteer
Computing

Edutainment

Why **Mobile** Volunteer Computing?

- Number of smartphones already overtake number of personal computers in 2014
- Smartphone is inactive and plugged-in on average of 7 hours each night

Reference : Lella, Adam, and Andrew Lipsman. "The US mobile app report." 21st August, available at: <http://www.comscore.com/Insights/Presentationsand-Whitepapers/2014/The-US-Mobile-App-Report> (accessed 8th April, 2015) (2014).

Arslan, Mustafa Y., et al. "Computing while charging: building a distributed computing infrastructure using smartphones." Proceedings of the 8th international conference on Emerging networking experiments and technologies. ACM, 2012.

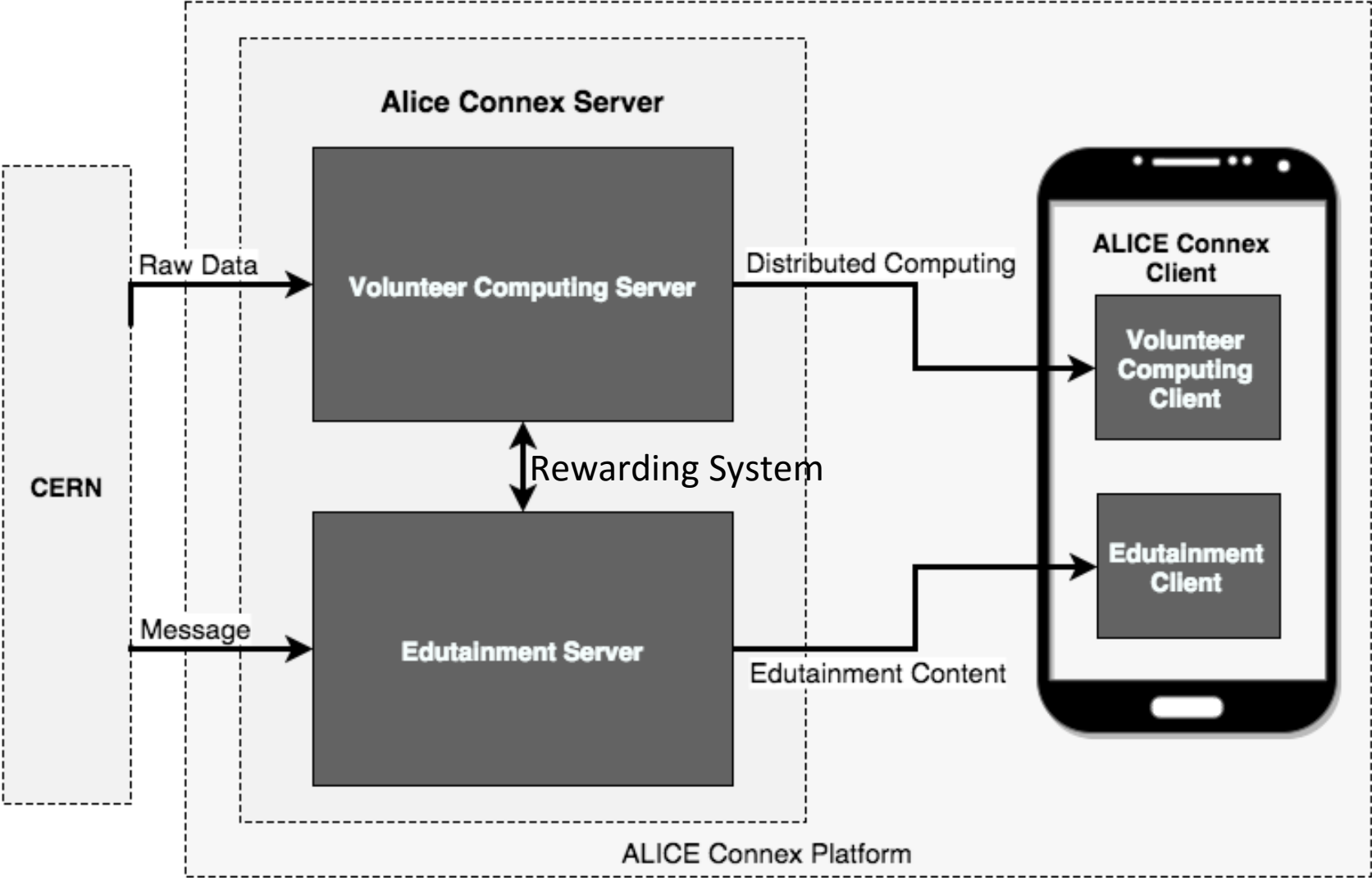
Why Edutainment?

- Public education focus on knowledge
- Channel to approach young generation

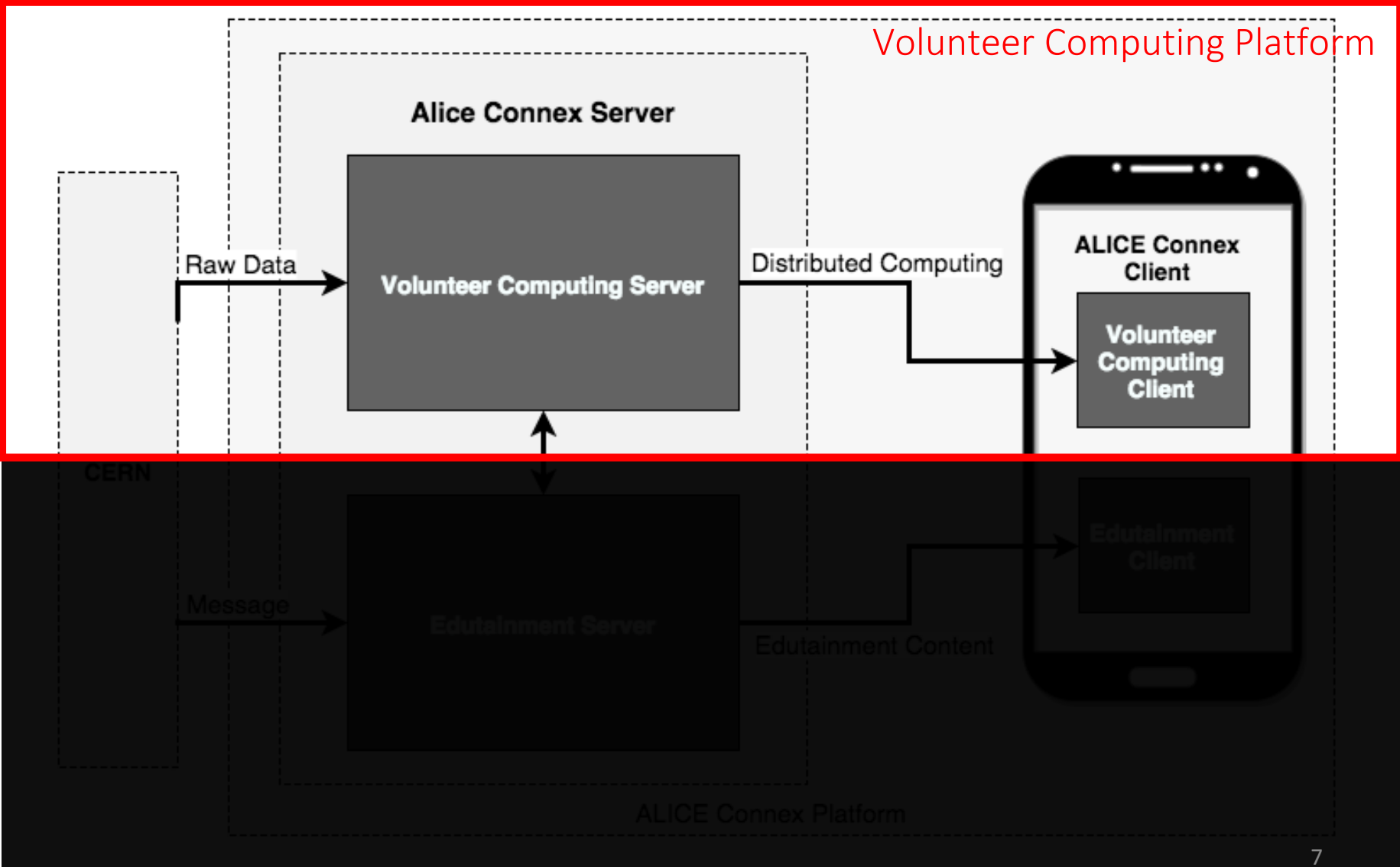
Aim & Objective

- Exploit Inactive cycle of Mobile Devices
(Volunteer Computing)
- Promote Science to the communities
(Volunteer Computing / Edutainment)
- Promote Science to Young Generation
(Edutainment)

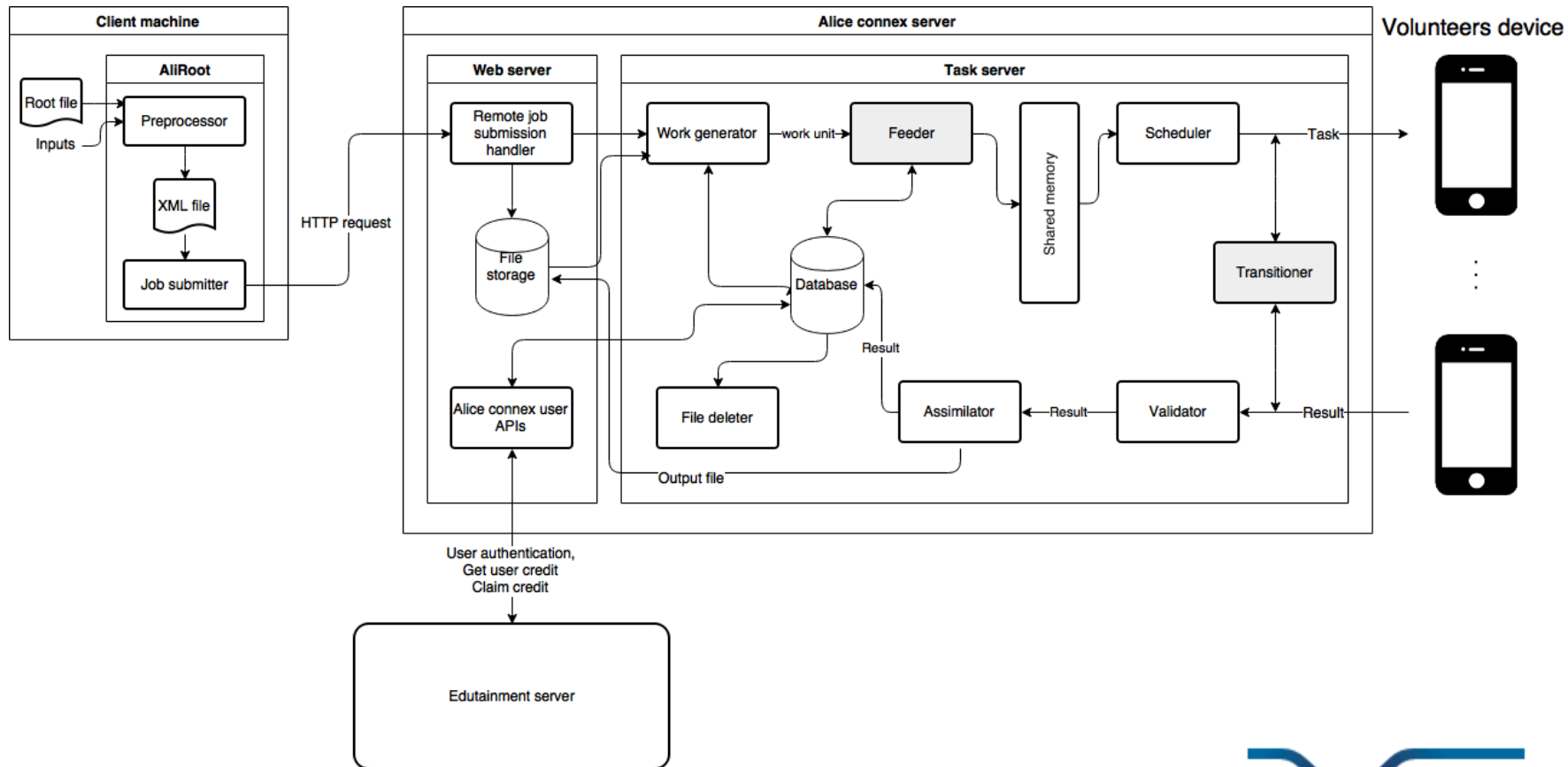
Overall Design of ALICE Connex



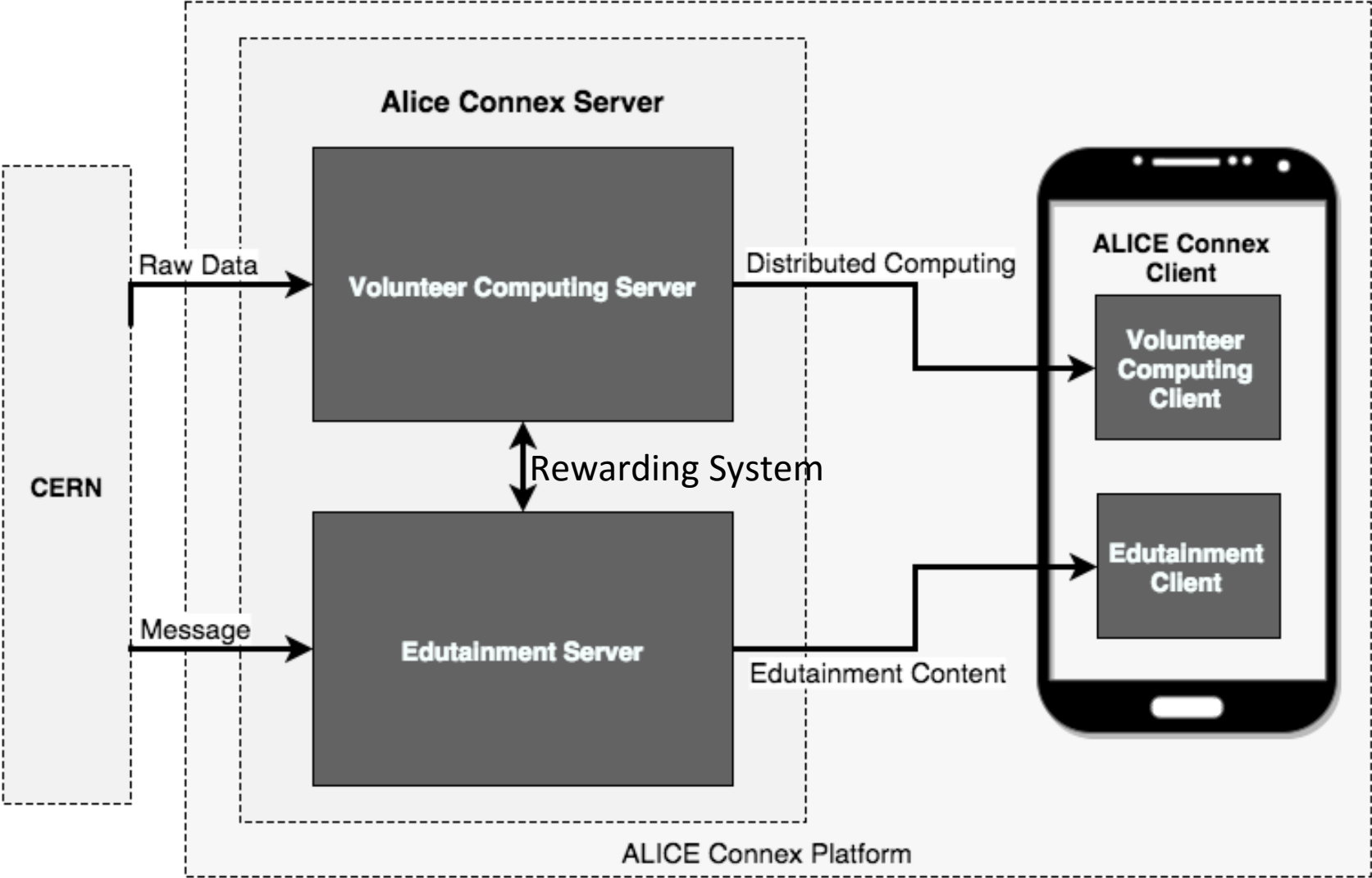
Overall Design of ALICE Connex



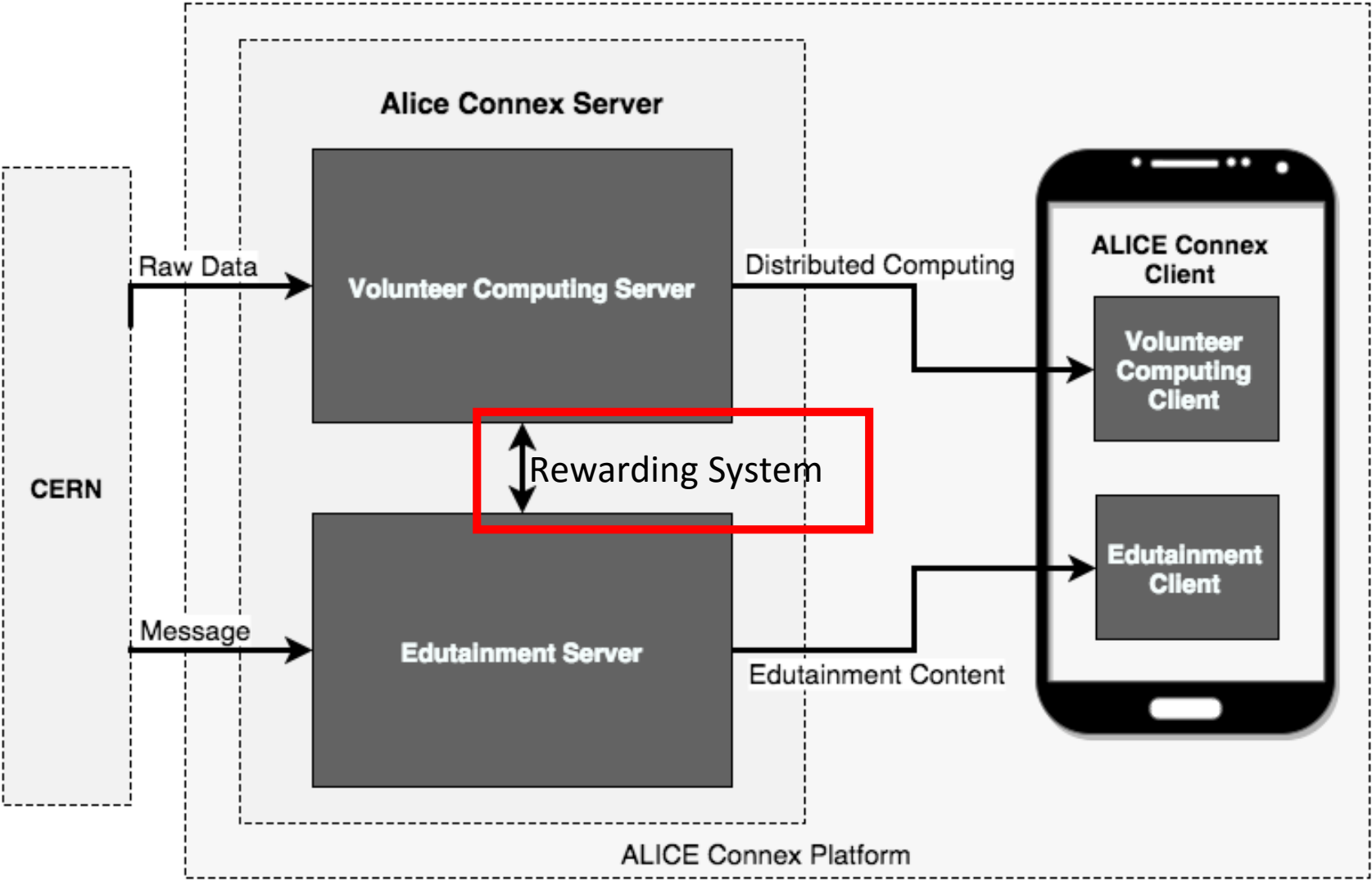
Volunteer Computing Components



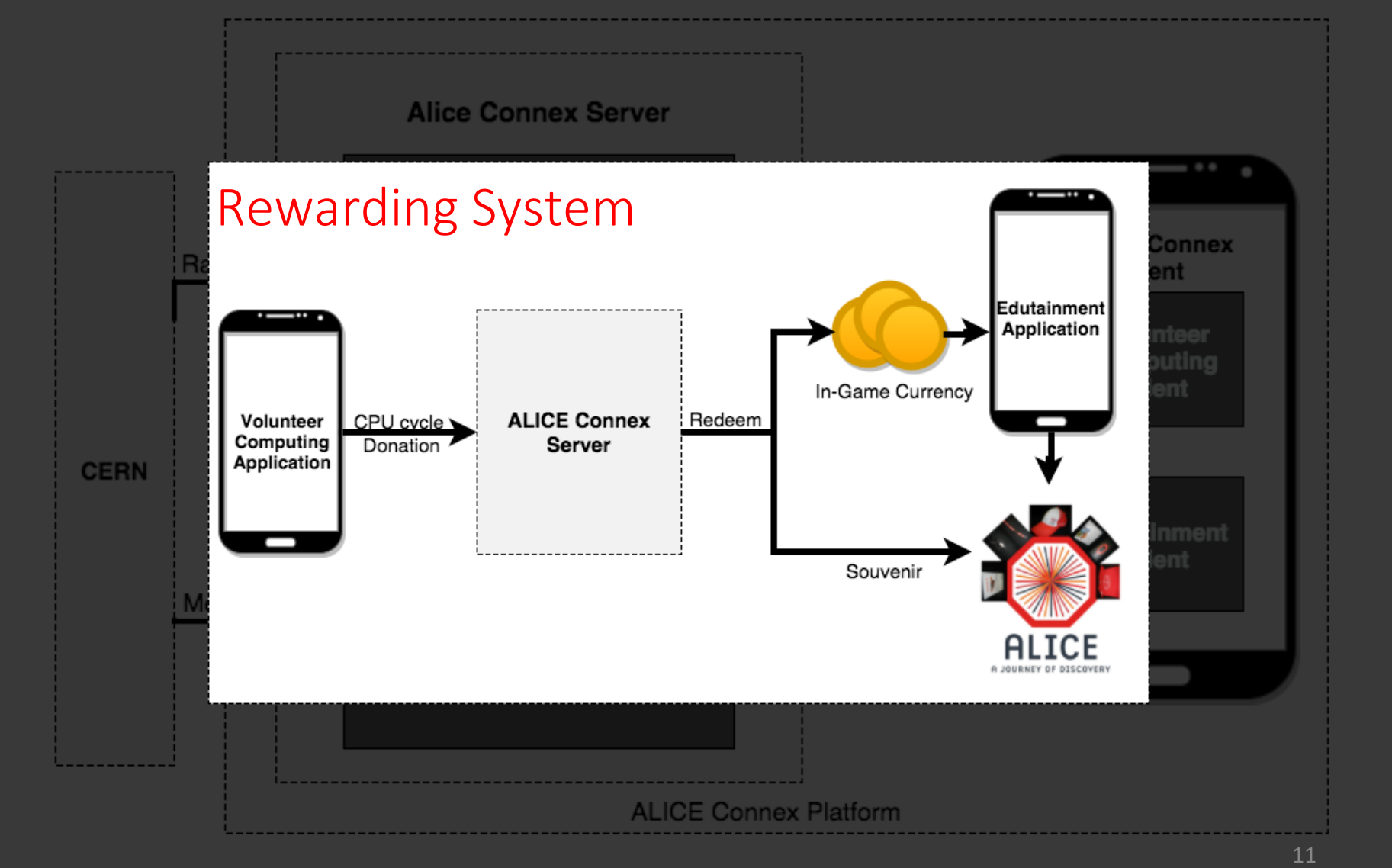
Overall Design of ALICE Connex



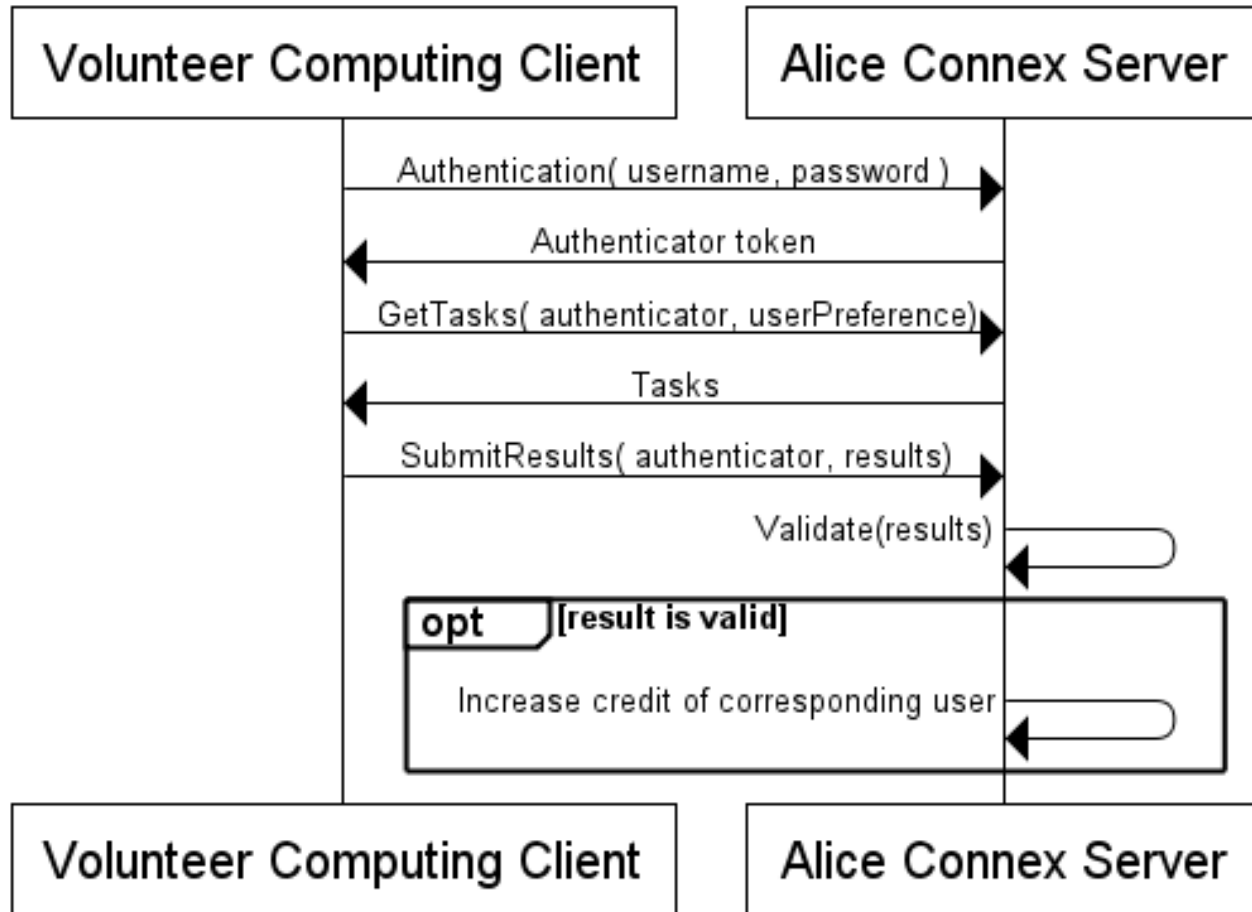
Overall Design of ALICE Connex



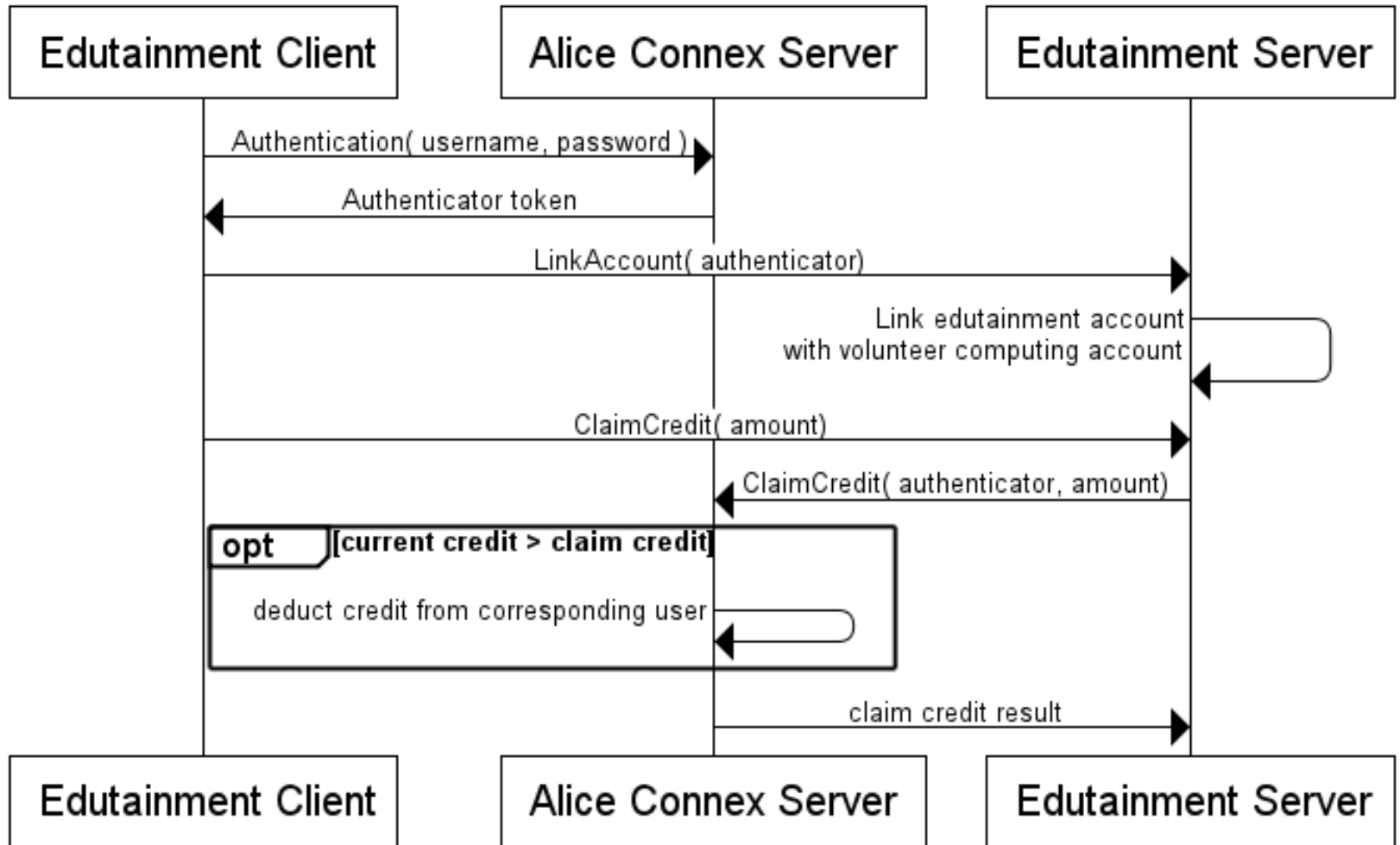
Overall Design of ALICE Connex



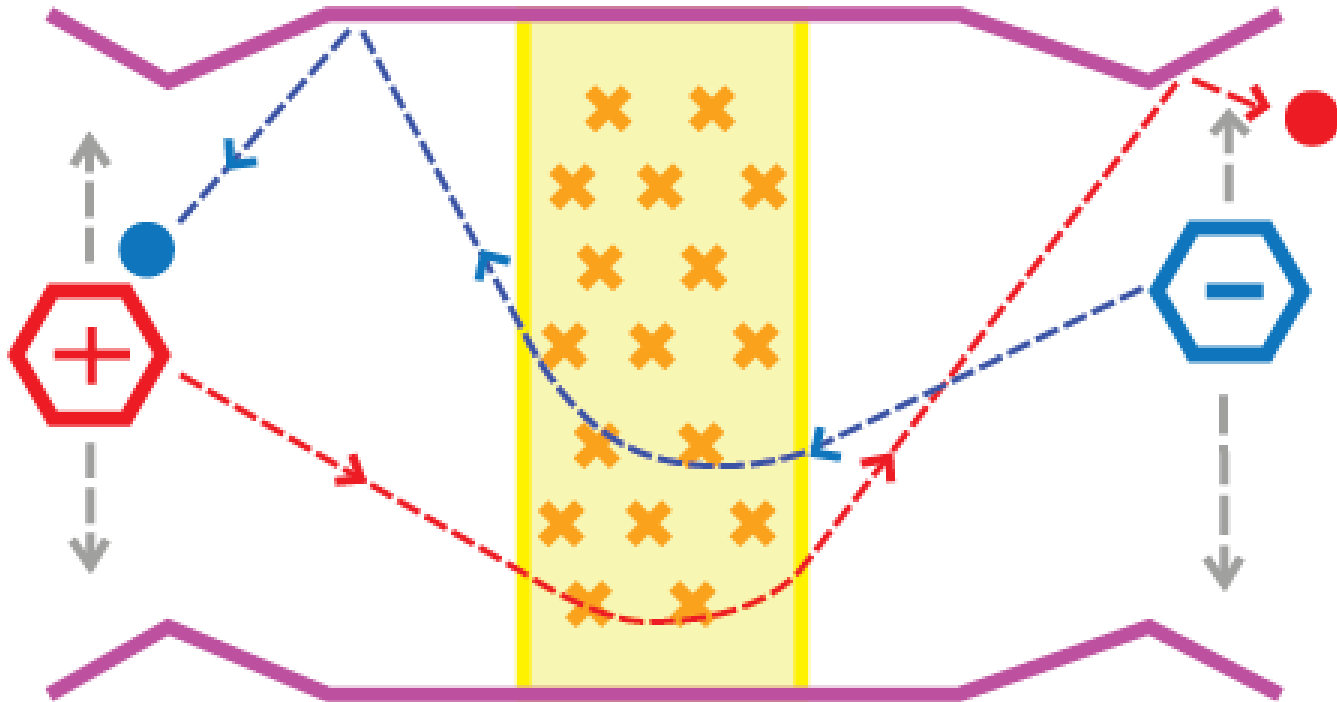
Rewarding system



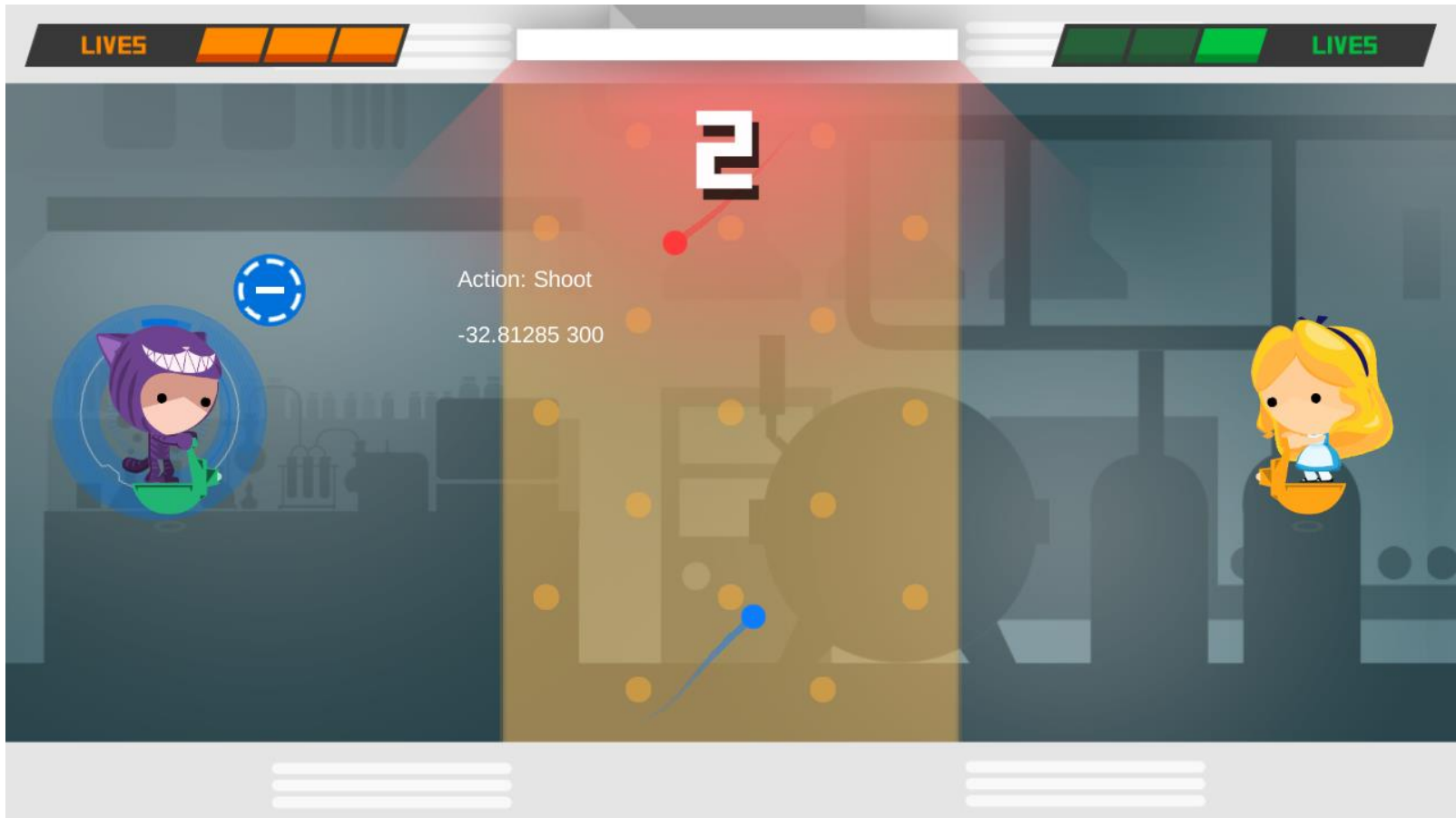
Rewarding system



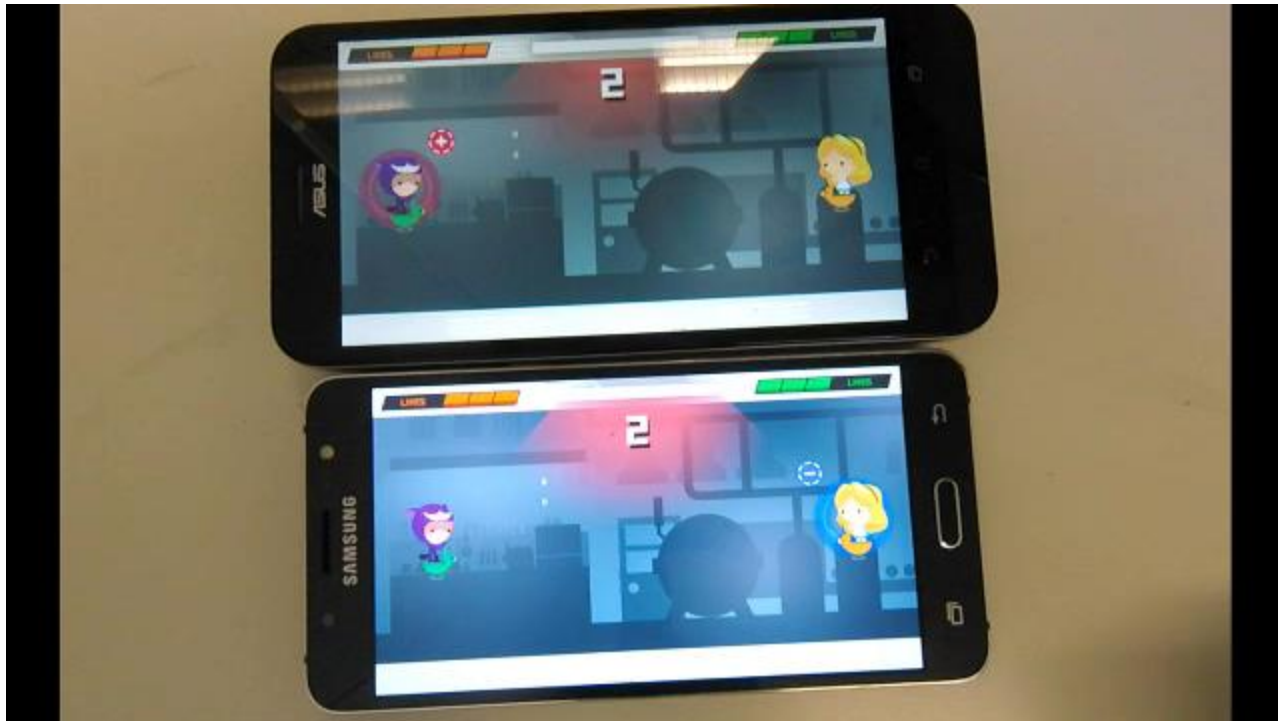
Edutainment Design



Our Prototype: Particle Shot



Our Prototype: Particle Shot

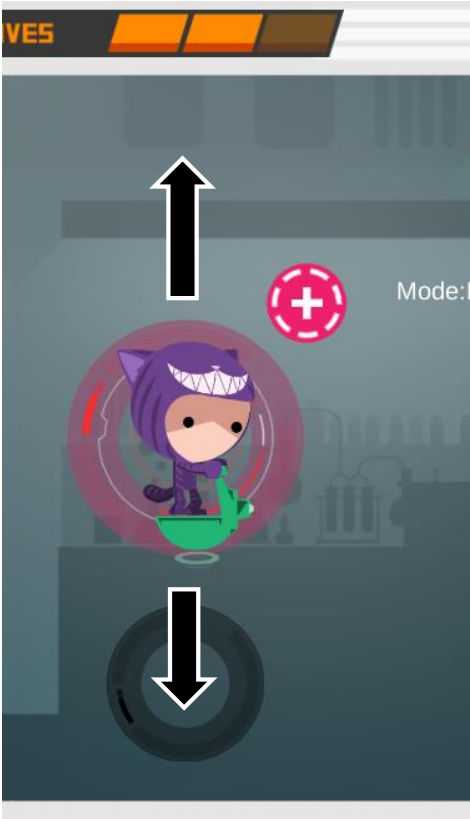


Control

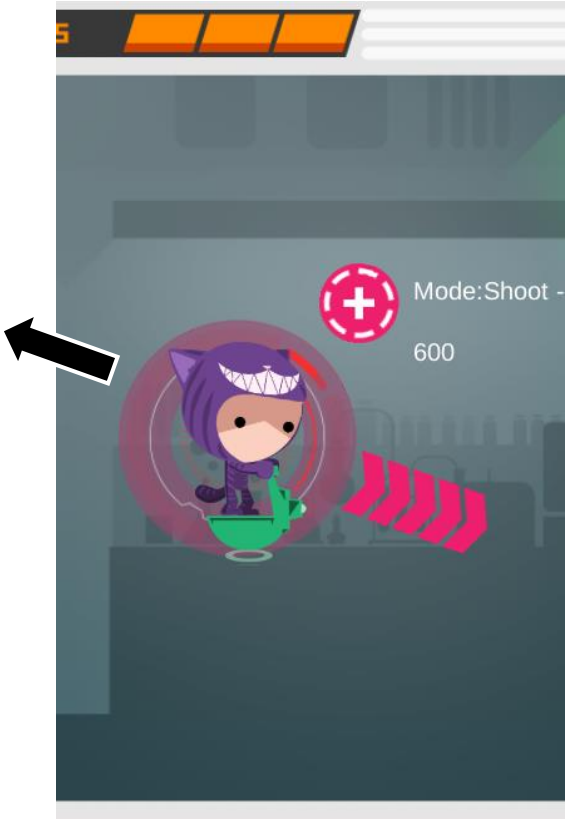
Change Charge



Move



Shoot



In Progress



Q&A

Thank you