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


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

![Diagram of ALICE Connex system architecture]

- **Alice Connex Server**
  - Volunteer Computing Server
  - Distributed Computing

- **Edutainment Server**
  - Edutainment Content

- **ALICE Connex Client**
  - Volunteer Computing Client
  - Edutainment Client

- **CERN**
  - Raw Data
  - Message

**Rewarding System**
Overall Design of ALICE Connex
Overall Design of ALICE Connex

Rewarding System

- Volunteer Computing Application
- ALICE Connex Server
- Redeem
- In-Game Currency
- Souvenir
- Edutainment Application

CERN

ALICE Connex Platform
Rewarding system

Volunteer Computing Client

Authentication(username, password)
  Authenticator token
  GetTasks(authenticator, userPreference)
  Tasks
  SubmitResults(authenticator, results)

Alice Connex Server

Validate(results)

Volunteer Computing Client

www.websequence diagrams.com
Rewarding system

Edutainment Client

Authentication(username, password)

Authenticator token

Alice Connex Server

LinkAccount(authenticator)

Edutainment Server

Link edutainment account with volunteer computing account

ClaimCredit(amount)

ClaimCredit(authenticator, amount)

Edutainment Client

Claim credit result

Opt[current credit > claim credit]

deduct credit from corresponding user

Edutainment Server

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Edutainment Design
Our Prototype: Particle Shot
Our Prototype: Particle Shot
Control

Change Charge

Move

Shoot
In Progress
Q&A

Thank you