ALICE Connex

Mobile Volunteer Computing and Edutainment Platform

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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 Platform

Alice Connex Server

Volunteer Computing Server

Distributed Computing

ALICE Connex Client

Volunteer Computing Client

Raw Data

CERN

Message

Edutainment Server

Edutainment Content

Edutainment Client

ALICE Connex Platform
Volunteer Computing Components
Overall Design of ALICE Connex
Overall Design of ALICE Connex

- Alice Connex Server
- Volunteer Computing Server
- Edutainment Server
- CERN
- Raw Data
- Message
- Distributed Computing
- Edutainment Content
- ALICE Connex Client
  - Volunteer Computing Client
  - Edutainment Client
- Rewarding System
Overall Design of ALICE Connex

Rewarding System

Volunteer Computing Application → ALICE Connex Server → In-Game Currency

CERN

ALICE Connex Platform

Edutainment Application

Redeem

Souvenir
Rewarding system

Volunteer Computing Client

Authentication(username, password)

Authenticator token

GetTasks(authenticator, userPreference)

Tasks

SubmitResults(authenticator, results)

Validate(results)

opt [result is valid]

Increase credit of corresponding user

Alice Connexx Server

Volunteer Computing Client

www.websequencediagrams.com
Rewarding system

Edutainment Client

Authentication(username, password)

Authenticator token

Alice Connex Server

LinkAccount(authenticator)

Link edutainment account with volunteer computing account

ClaimCredit(amount)

ClaimCredit(authenticator, amount)

Edutainment Server

Edutainment Client

deduct credit from corresponding user

Claim credit result

www.websequence diagrams.com
Edutainment Design
Our Prototype: Particle Shot
Our Prototype: Particle Shot
Control

Change Charge

Move

Shoot
In Progress
Q&A

Thank you