

IR-PhoneX: An approach to Provide information to save lives

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Agenda

Introduction



Objectives



Method



Conclusion



Introduction

Ubiquitous

Fast and free

**Information
on finger tips**



Easy to use

Function offline

Cautious

Why the mobile app is important for railway users?!

Introduction

Real time information for:

Reduce waiting time for trains

Help passengers plan their journey

Enhance railway service performance

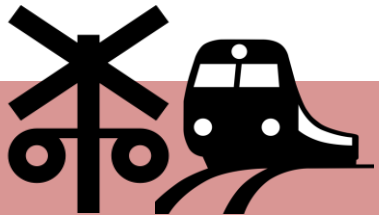
Increase efficiency



New technologies, innovative solutions and digital revolution can play an important role to enhance railway service

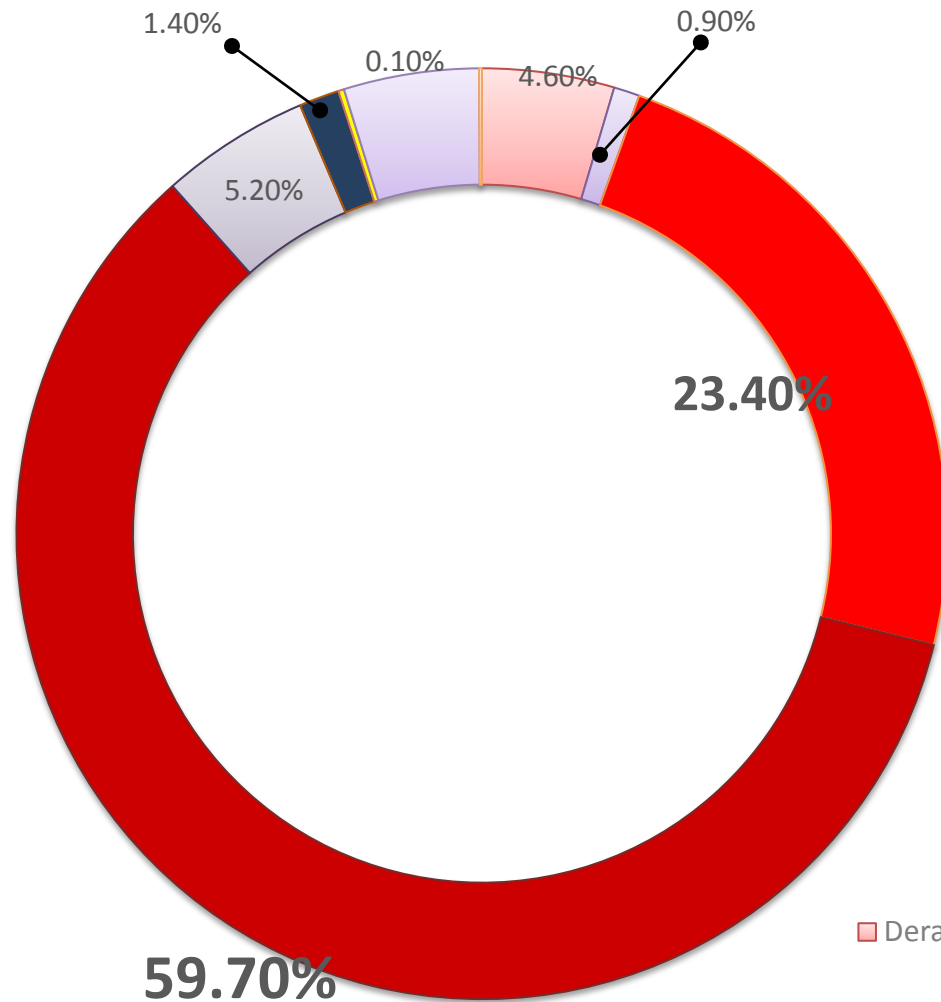
Introduction

- Train-pedestrian collisions are leading cause of fatality in rail accidents all around the world
- About every 3 hours, a person or a vehicle is hit by a train in the US
- Trespassing and related accidents are important challenges of railways worldwide



New technologies, innovative solutions and digital revolution can play an important role to prevent collisions.

Types of accidents according to UIC-SDB



Individual hit by train

- 51.2% hit by a train not at LC
- 8.5% hit by train at LC

Train collision with an obstacle

- 7.4% collision with an obstacle not at LC
- 16% collision with obstacle at LC

Derailment of trains

Train collision with another train

Train collision with an obstacle

Individual hit by a train

Individual falling from a train

Fire in rolling stock

Electrocution by overhead line or third rail

Shunting operations

Runaway vehicles

Ways to reduce pedestrian-train collision



Warning signs



Education



Countermeasures



**Innovative ways
and
digitalization**

Objectives

What we are seeking for?

Effective awareness

Information

**Give information
and alerting about
Boarding and
alighting**



Cautious

**Reduce collision of
pedestrian-trains
and save more lives
by alerting for risky
distance from
railway**

Application Software

User version

- Alarm
- Real time passenger/train information system

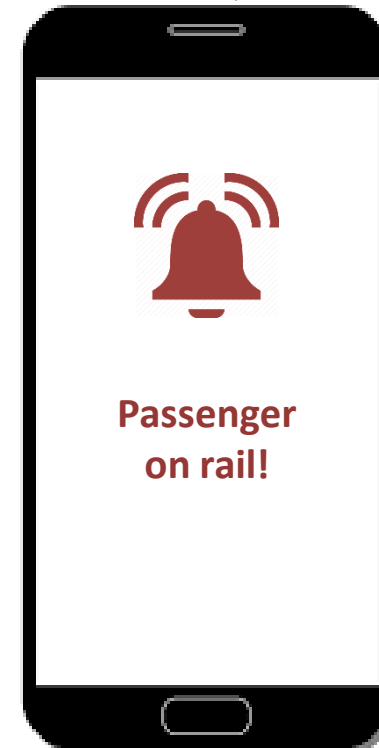


Driver version

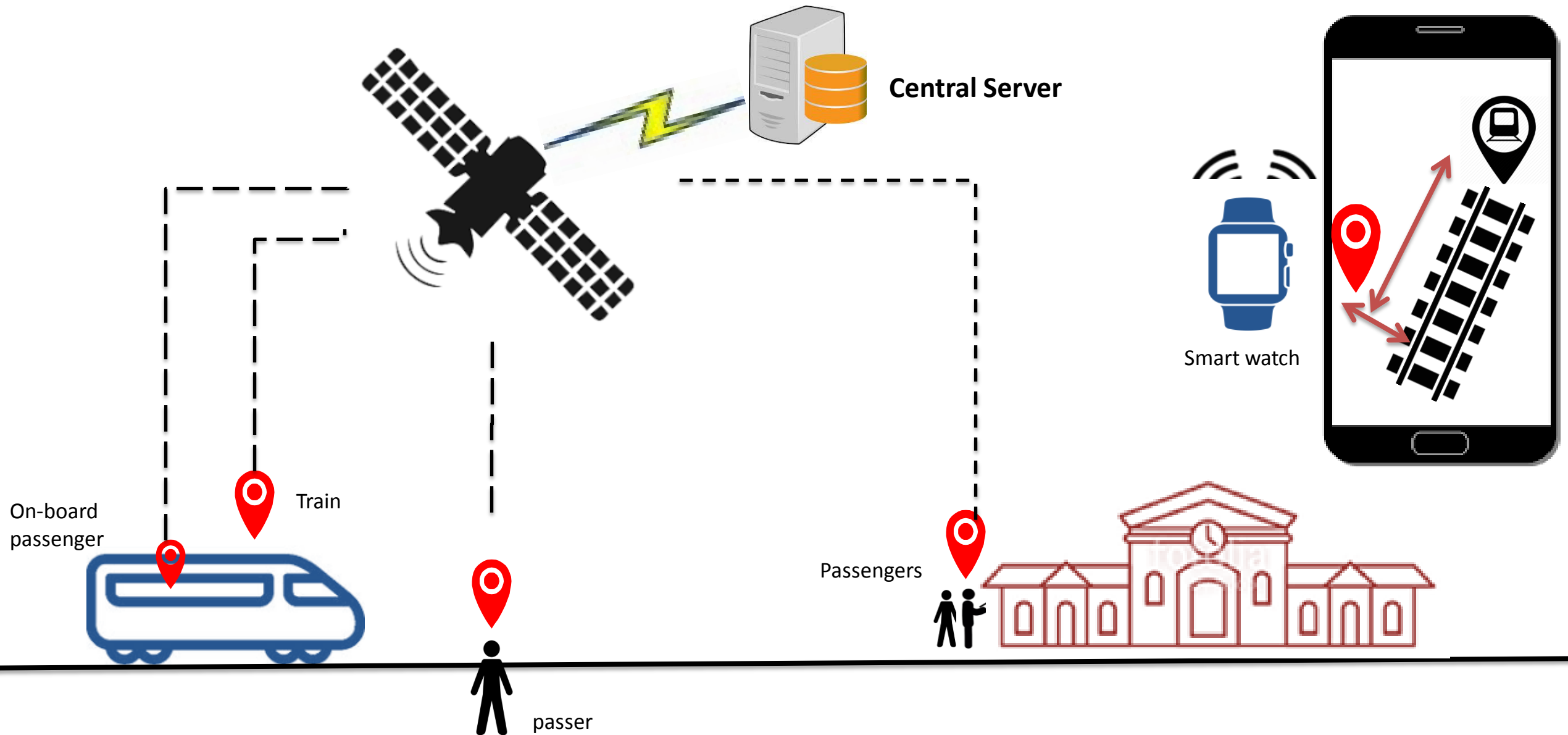
- Alarm



Passenger
on rail!



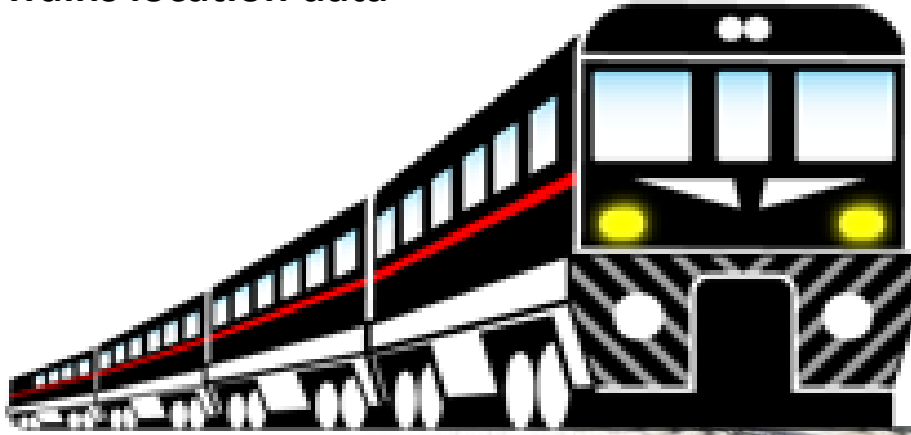
Method



Cautious Method

STEP 1

Trains location data



STEP 2

User location data

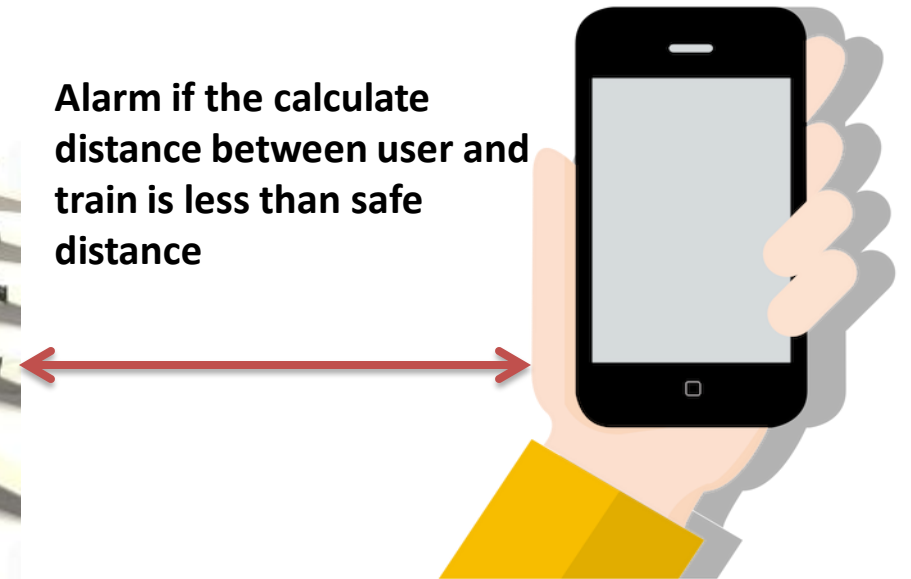
User distance from train



STEP 3

Software Application

Alarm if the calculate distance between user and train is less than safe distance



Features of the application

Inform train arrival

Aware railway users about coming train, in danger and normal situation. it can aware trespassers as well

1

2

Alarm users especially disabled people

Vibrating and voice alarming of smart watch help blind and deaf people to be aware from danger

Aware driver

Inform driver about existence of a person on the line

3

4

Cost effective

Use already available device

Conclusion



Collisions reduction even not at LC



**help blind and deaf people to be aware from danger of trains
And help them for boarding and alighting.**



Thank you for your kind attention



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