CPaas.io:
City Platform as a Service – Integrated and Open

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Objective: Open Platform for Smart City

Functions

- Collection, linking, analysis of data from various sources, and extraction of important information
  - sensor data, open government data, social media data, ...
- Flexible access control to realize business logic
- Dissemination of real-time data (such as IoT data) as open data
  - Facilities to reduce cost of data provider, such as API, data cleaning, ...
- Micro service: Light-weight parallel processing

Popularization

- Establishment of the platform as basic platform for IoT service coordination/federation
- Establishment of the platform as platform for vitalizing local economy organization by clever use of data
Work Packages of This Project

WP1: Ethics Requirements

WP2: Use Cases & Trials

WP3: Platform Architecture

WP4: Cloud & Edge Programming

WP5: Citizen Empowerment

WP6: Holistic Data Management

WP7: Impact Generation

WP8: Project Management
Goal: IoT Open Platform
Experiment #1:
Sapporo Asian Winter Games / Sapporo Snow Festival
Experiment #2: Emergency Medical Care @ Yokosukae

Communication is basically encrypted

Patients’ image is sent from ambulance to hospital on P2P communication

Internet

LTE etc.

Internet

Tablet x 1
Network Camera x 2
LTE Router x1

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Experiment #3: Public Transport @ Tokyo

Information services of public transportation

Special information service of Public Transportation for the Physically Disabled

Ubiquitous Location-aware Information Services

u2 Open IoT Platform

- Information services
- Open data platform
- Data collection from public transportation companies/sectors

Railway data (Realtime Location, Delay, Cancellation, etc...)

Tokyo Station Data (Name and location of facilities, Environmental information (temperature, humidity, and pollen))

Toei Bus Data (Realtime location, delay, cancellation, etc...)

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## Schedule

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**WP2**

- Sapporo Experiment Y1 (Sightseeing, Transportation, Sports)
- Translation Experiment Y1 (Transportation, Sightseeing)
- Yokosuka Experiment (Emergency Medical Care)
- Public Transportation Experiment Y3

**WP3〜WP6**

- Requirement Analyses + Architecture Design
- First Implementation
- Final Implementation

**Whole Project**

Kickoff Meeting (Nov) TRONSHOW 2016

# 1 Interim Appraisal TRONSHOW 2017

# 2 Interim Appraisal TRONSHOW 2018

# 3 Final Evaluation

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Deployment Plan of Project Results

- Establishment of an all-in-one package to build smart city
  - Offering CPaaS.io package compatible with various programming models between clouds and edges
  - This package provides various elements to realize smart city and makes application development easy

- Promotion and deployment in cooperation with IoT communities, open data communities, industry, governments, ...

- Contribution to 2020 Tokyo
  - Public transportation, sightseeing, sports, support of physically challenged, ...
Deployment Plan of Project Results

- Dissemination and promotion via papers, lectures, and symposiums

- Demonstration at TRONSHOW, TRON Symposium
  - Held in each December (14th – 16th December, 2016)
  - Co-sponsored by IEEE Consumer Electronics Society
  - Number of participants each year: 3,000 people /day x 3 days