Applied Spatial Information Science III:
An Introduction to Community Security Checks Using “Kiki-Gaki Map”

Yutaka HARADA
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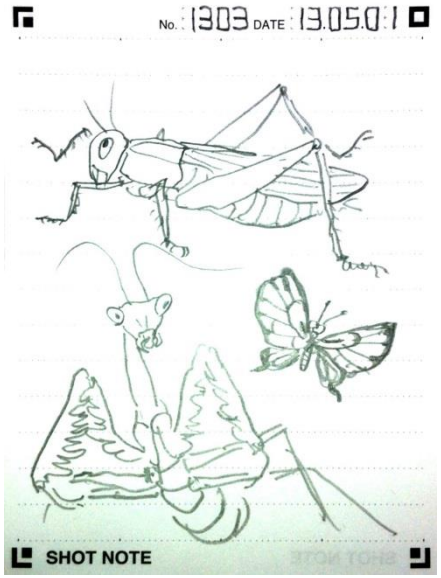
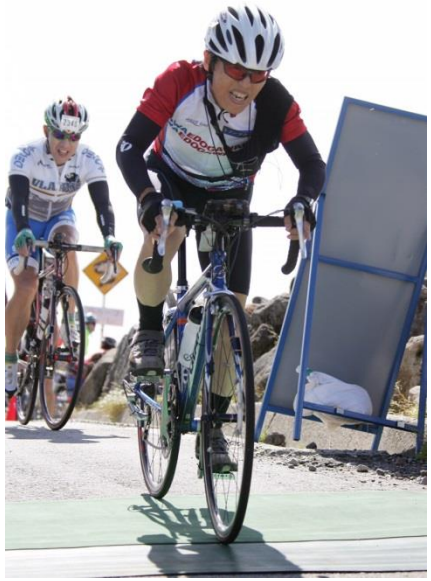
Self Introduction

- Yutaka HARADA, Ph. D.
  - is specially appointed researcher at the Crime Prevention Section, National Research Institute of Police Science.
  - His major research interest is in the analysis of spatial and temporal patterns of crime and longitudinal analysis of delinquency careers among juveniles.
  - He received a B. A. degree from University of Tokyo and a Ph. D. degree in criminology from the University of Pennsylvania.

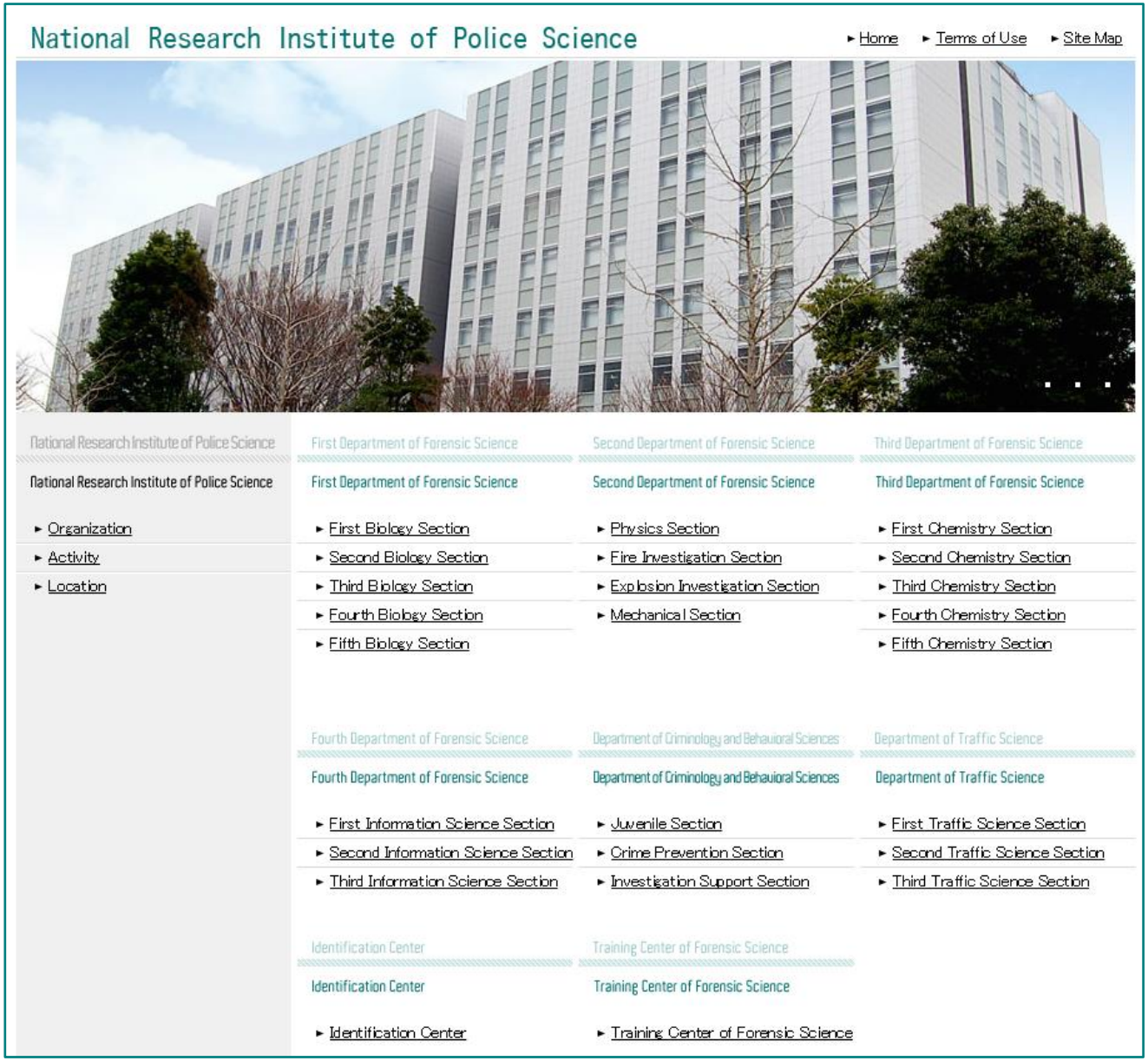
Self Introduction (Cont'd)





Introduction to the NRIPS

- A Research Institute attached to the National Police Agency of Japan
- First founded in 1948
- Staffed with approximately 100 researchers
- Consists of 6 research departments, plus 2 Centers



Department of Criminology and Behavioral Sciences

- Juvenile Section
  - Cause of Delinquency
  - Guidance / Training
- Crime Prevention Section
  - Community and Crime
  - Spatial Analysis of Crime
- Investigation Support Section
  - Offender Profiling
  - Investigative Psychology

Course Description

- "An Introduction to Community Security Checks Using 'Kiki-Gaki Map'"
  - "Kiki-Gaki Map" is an easy-to-use software tool for recording the process and findings of field observations, in a systematic and objective manner (Harada et al. 2011). With the aid of this tool, you can easily record such pieces of information as the route you took in the course of security check town walk, the pictures you took on site, and the voice-recorded field notes, in the form of geospatial data, so that you may make use of them as resource materials for a variety of analyses and studies.

  - This course aims to provide hands-on learning opportunities on such topics as scientific and technological bases of this software tool including spatial information science and satellite positioning, the relationship with the lecturer's proposal of "preventive criminology," and potential applications to fieldwork in various settings.

Course Objectives and Prerequisite

- Course Objectives:
  - To understand the scientific and technological bases and the concept of "preventive criminology," through the hands-on learning of the "Kiki-Gaki Map."
  - To understand the methods of analyses and the manner of utilization of the data recorded with the "Kiki-Gaki Map.
  - To develop basic skills to acquire and analyze geospatial data of your own, based on the basic knowledge and practical applications.

- Prerequisite:
  - It is desirable (but NOT mandatory) to have basic skills and experiences of personal computer applications such as word processors and spreadsheets.

Introductory Video: “Kashi-ken!”

Source: ”The Kashiwa City Research Institute”: #46.

Made by the City of Kashiwa, 2016/05/16

http://www.city.kashiwa.lg.jp/soshiki/020300/p035201.html

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“Kiki-Gaki Map”(Listen-Write Map)

A Software Tool that Helps Creating
Spatial Datasets of Field Observations
for the Purpose of Accident/Victimization Prevention

Through Traffic Prohibited! .
But the kids would go through anyway.

- Finds out oral comments that correspond to a photo from the continuous sound data, by making use of the shooting date and time of the photo as a search key, so that one can easily take memos of the comments.

→ Can be used in various activities for “learning about the community.”

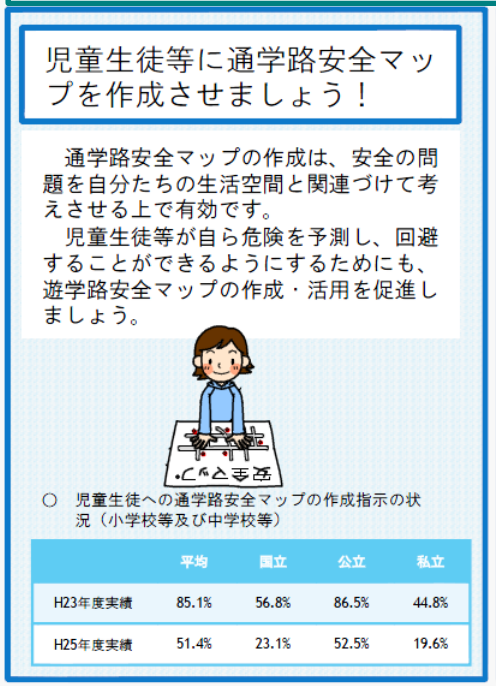
Background: Calls for Improved School Safety

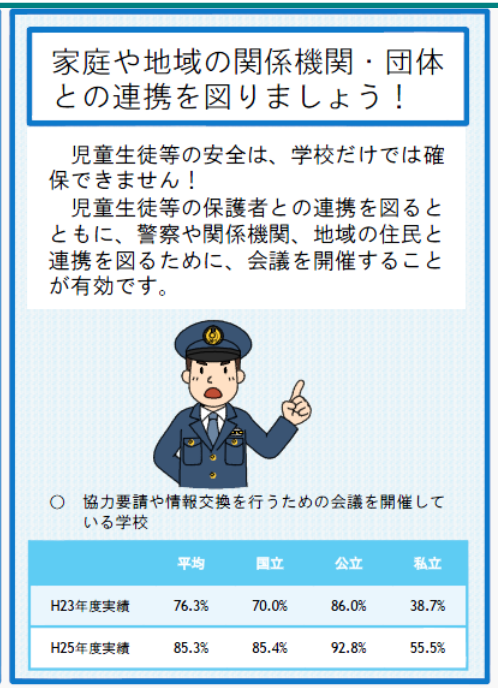
3．通学路安全マップの作成

児童生徒等に対し、通学路の安全マップを作成させることは、安全の問題を自分たちの生活空間と関連付けて具体的に考えさせる教育として非常に有効である。児童生徒等が自ら危険を予測し、回避することができるようにするためにも通学路の安全マップの作成及び活用を促進すること。

4．家庭や地域の関係機関・団体との会議の開催

学校においては、児童生徒等の安全を確保するために、児童生徒等の保護者との連携を図るとともに、当該学校が所在する地域の実情に応じて、当該地域を管轄する警察署その他の関係機関、地域の安全を確保するための活動を行う団体その他の関係団体、当該地域の住民その他の関係者との連携を図る必要がある。

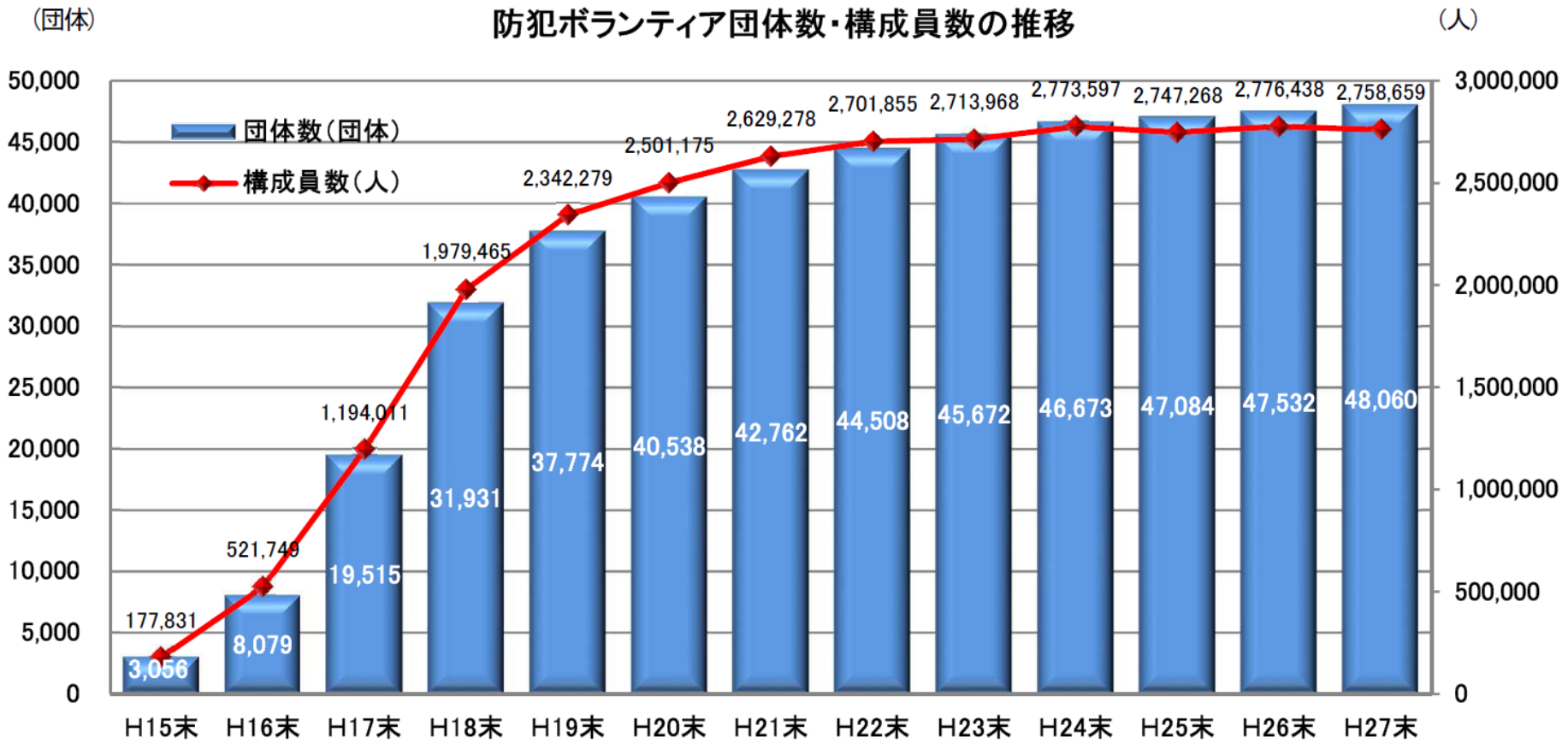




出典：文部科学省スポーツ・青少年局学校健康教育課長「学校安全に関する更なる取組の推進について（依頼）」（平成27年3月31日）

- Request schools to “develop and utilize safety maps of school commuting roads.”

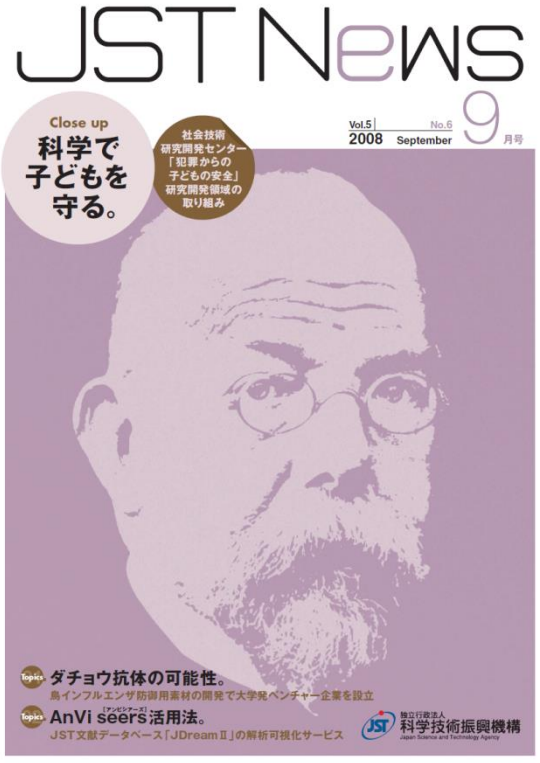
Trends in Crime Prevention Volunteer Groups and Their Members



Source: National Police Agency (2016/03/18)
https://www.npa.go.jp/safetylife/seianki55/news/doc/seianki20160318.pdf

“Establishing an Empirical Basis to Measure and Prevent Crimes against Children”

- Research project funded by Research Institute of Science and Technology for Society (RISTEX), Japan Science and Technology Agency (JST)
（FY 2007 through 2011）

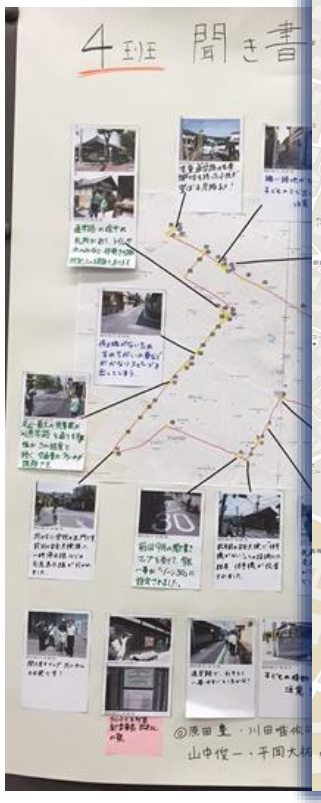


JST News
Sept. 2008

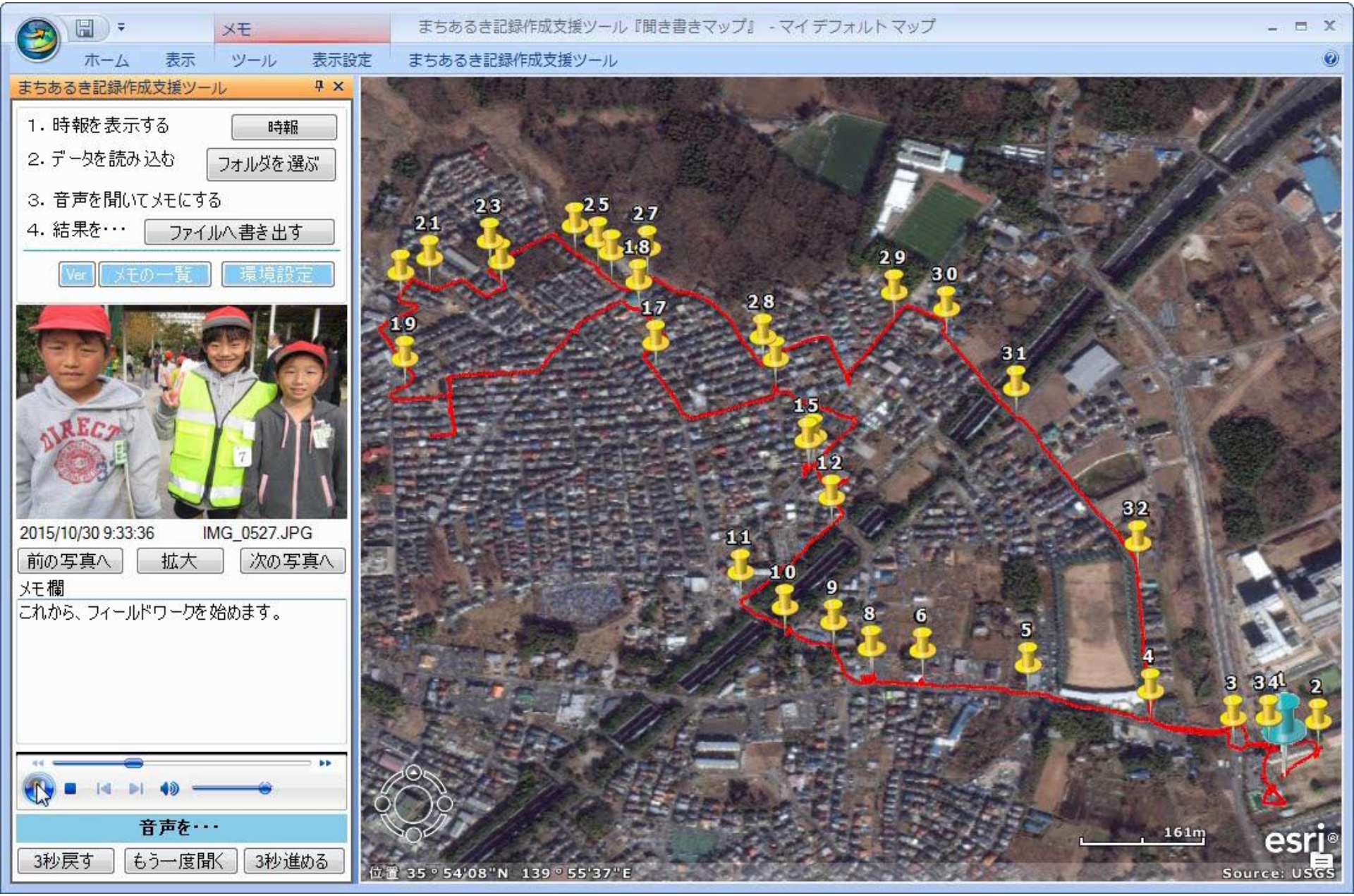
Safety Check Mapping in Chichibu

- 2015/05/17
- Hosted by Chichibu City Safe Community Promotion Committee, etc.

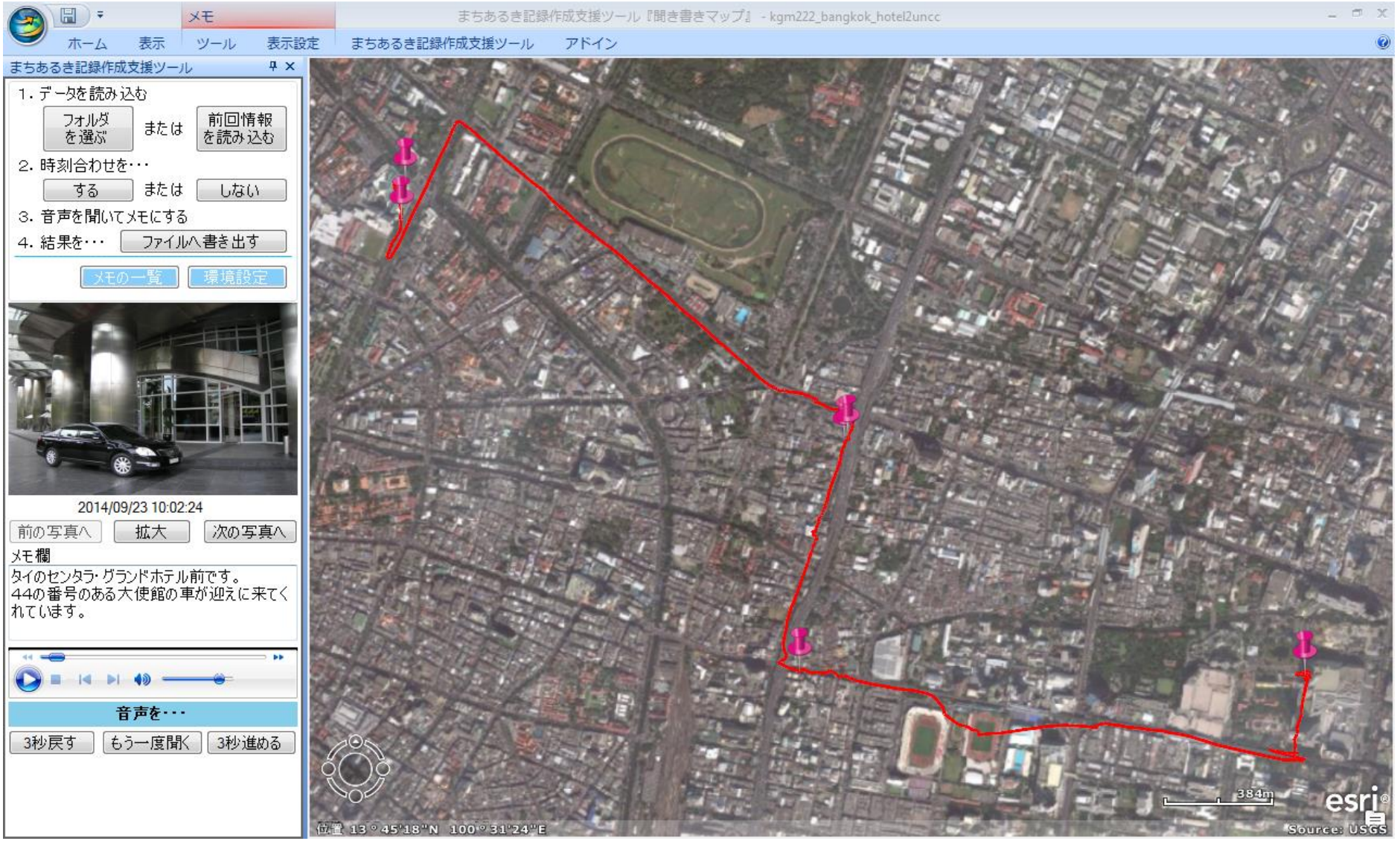
- Groups 4–6 used “Kiki-Gaki-Map”:
  - Maps printed using 2 mobile printers
  - 3 maps with priority of issues, created in approx. 1 hour 15 minutes



Fieldwork by Elementary School Students (2015/10/30)



A Test in Bangkok (2014/09/23)



Commuting Route from Hotel to UNCC; Pictures Taken from Inside a Car.

A Two-column List of Cards: Bangkok Data

2014/09/23

1

2014/09/23 10:02:24
タイのセンタラ・グランドホテル前です。
44の番号のある大使館の車が迎えに来てくれています。

2

2014/09/23 10:12:43
けっこう渋滞しています。

3

2014/09/23 10:21:40
ホテルのある一角からちょっと外れると、庶民の生活があります。

4

2014/09/23 10:22:16
この辺にもキャッシュディスペンサーがあります。

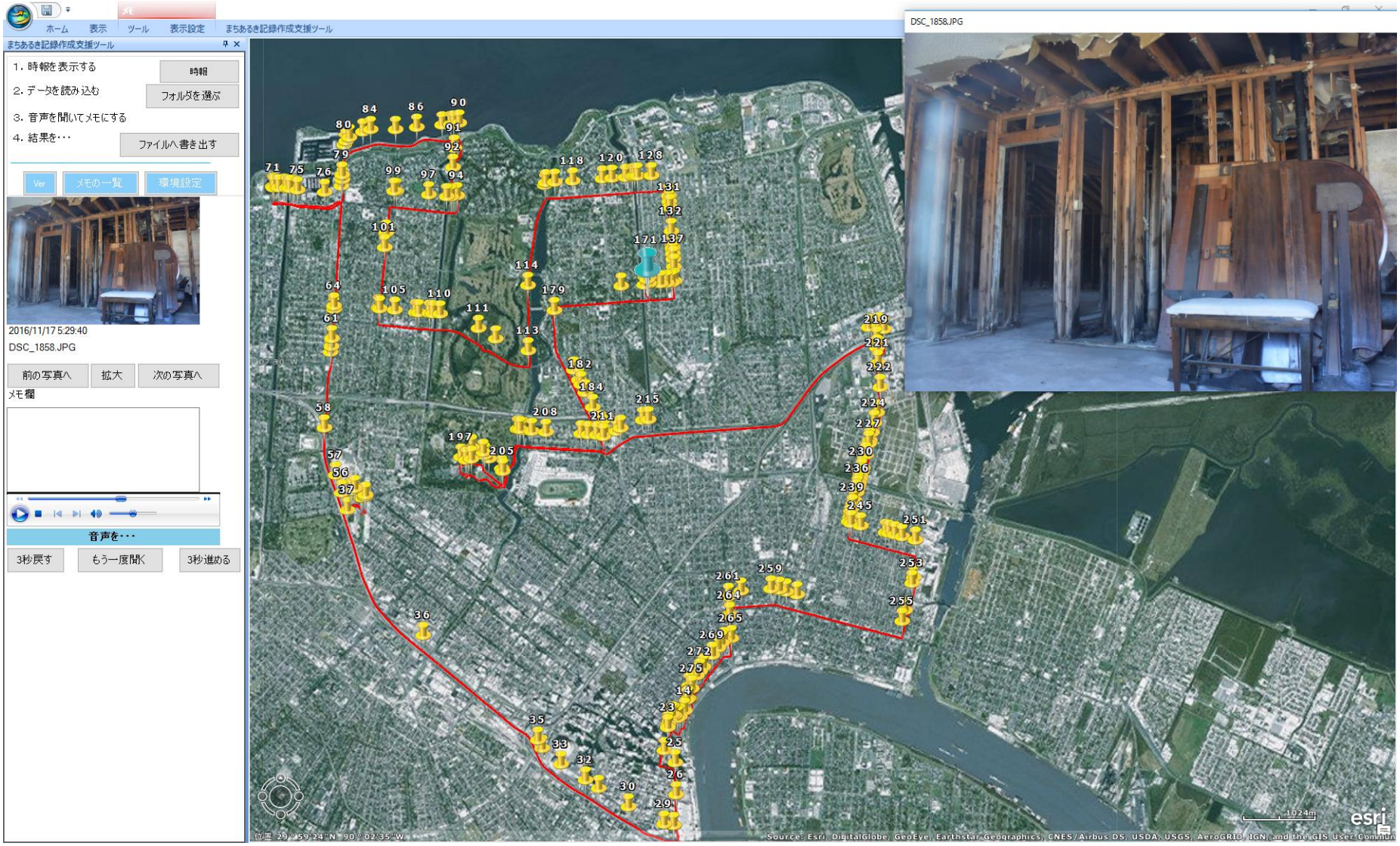
5

2014/09/23 10:29:20
国連の建物に着いたようです。

6

2014/09/23 10:31:12
これで終わりたいと思います。
UNCCエントランスこちらです。

Even Further Application…

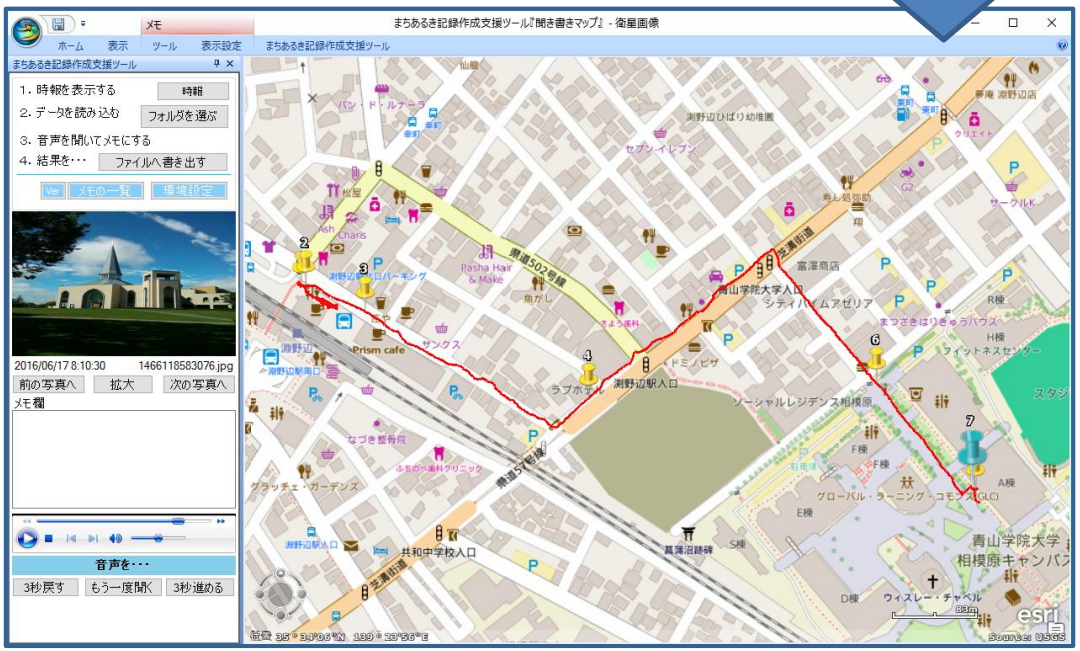


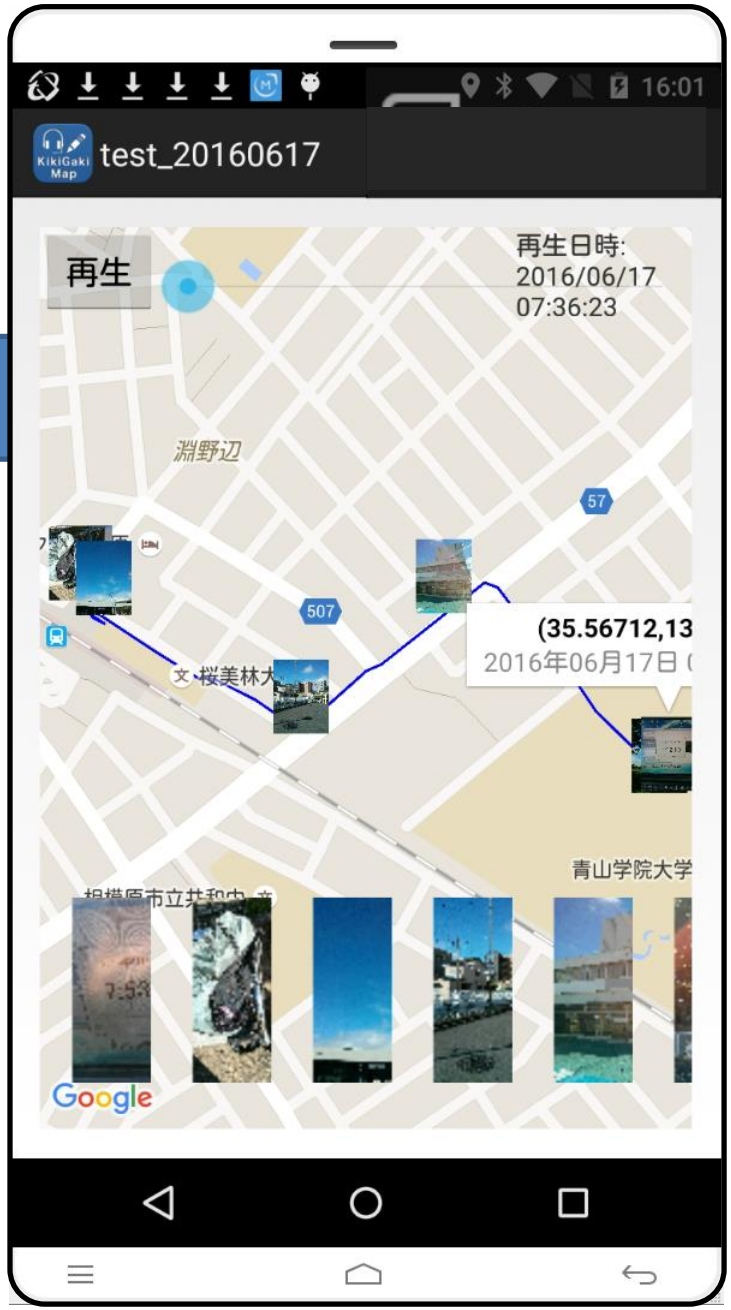
"Hurricane Katrina Tour" in New Orleans

(2016/11/16 : First Day of the American Society Criminology Annual Meeting)

In Order to Achieve More Widespread Use…

- Developing Smartphone (Android OS) Application
  - Functionality of GPS Logger, IC Recorder, Digital Camera with a single device!
- Easy to Cooperate with PC ♪





Giving the Outcomes Back to Society

- Website “Prevention of Childhood Victimization based on Scientific Research”
- Give back to the grass-root efforts for protecting children:
  - ・Scientific and easy-to-understand theory and
  - ・User-friendly tools
  - ・For free (at least for end users)
- Currently managed by: “Council for the Promotion of Preventive Criminology (CPPC)”

http://www.skre.jp/

Looking Forward: the Quazi-Zenigh Satellite System

Japanese satellite positioning system scheduled for year 2018

Source:
QZSS Service Inc.
Homepage

Lecture Plans

Lecture #1	What is “Kiki-Gaki Map?” (1): designs and functions of KGM; backgrounds and purposes of development; introduction of applications; aims and plans of the course
Lecture #2	What is “Kiki-Gaki Map?” (1): useful for what and how; relationship with spatial information science; relationship with “preventive criminology”; efforts to bridge research and practice
Lecture #3	Scientific Bases of “Kiki-Gaki Map” (1): spatial information sciences; geographic information systems; GPS and “Quasi-Zenith Satellite System”; the era of open data and open sources
Lecture #4	Scientific Bases of “Kiki-Gaki Map” (2): what is “preventive criminology”; two approaches in medical research; “developmental” and “situational” crime prevention
Lecture #5	Basic Operations and Applications (1): things to be prepared; installing the software; initial settings for convenient use

Lecture Plans

Lecture #6	Basic Operations and Applications (2): preparations by the day before fieldwork; conducting fieldwork; importing data and doing 'Kiki-Gaki'
Lecture #7	Basic Operations and Applications (3): printing data; paper-based map-making; points to remember for effective utilization
Lecture #8	Basic Operations and Applications (4): exporting data to external file; importing to general-purpose GIS; one-step further visualization and analysis
Lecture #9	Practical Applications (1): [case example] "model operation of practical safety education" at elementary schools; achievements and challenges; [practice] presentation and discussion of students' own work
Lecture #10	Practical Applications (2): [case example] "training course for the development of next-generation volunteer leaders"; achievements and challenges; [practice] presentation and discussion of students' own work

Lecture Plans

Lecture #11	Practical Applications (3): [case example] uncovering and disseminating buried sight-seeing information through the collaboration with local volunteers; achievements and challenges; [practice] presentation and discussion of students' own work
Lecture #12	Practical Applications (4): [case example] examining the improvement of positioning accuracy of the Quasi Zenith Satellite System; achievements and challenges; [practice] presentation and discussion of students' own work
Lecture #13	Directions for Further Developments (1): "integrated toolkits" with the cooperation with WebGIS; developing a smart phone version; safety education model operation for 2017
Lecture #14	Directions for Further Developments (2): Developing "Quasi-Zenith" compatible device; creating mechanisms for "social implementation"; toward a system of spatial data acquisition for the compilation and utilization of "local knowledge"
Lecture #15	Conclusions and Future Prospects: the importance of "input" system; combining "narrative" information with geospatial information; providing items of practical use; toward creating an "ecosystem of co-creation"