


PUTSPACE Conference

Surveillance in Brussels public transport: an exploratory assessment


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Plan of the presentation

1) Introduction

2) Video surveillance 

3) Travel card 

4) Telephone data 

5) Data sharing 

6) Conclusion

1. Introduction

Why talk about surveillance in PT in Brussels ?

- Previous work on the Smart City in Brussels → more “smart” = more surveillance
- PT = emblematic public space of a city → mandatory passage for thousands of people every day
- Surveillance = means of sorting out who is welcome/who is “undesirable” in the PT
- Overkill in PT surveillance following 9/11 and other terrorist attacks
- Purposes of processing personal data according to PT operators:
 - Better mobility efficiency
 - Public safety
 - Fraud regulation

→ **First overview of surveillance practices within Brussels PT**

2. Video surveillance @STIB



4



QUELQUE CHOSE DE SUSPECT ?
IETS VERDACHTS GEZIEN?
SEEN SOMETHING SUSPICIOUS?



TEL 1705

2. Video surveillance @STIB

Traffic Management



2. Video surveillance @STIB



**Risk management
eg. overcrowded platforms**



2. Video surveillance @STIB



Fraud detection



2. Video surveillance @STIB



Safety



2. Video surveillance @STIB



Historically

- Surveillance at ticket booths
- Flow management on platforms
- Later on: generalisation in the stations
- Over the last 10 years: refurbishing the stations and covering the whole area

Foreseen use:

- Automated metro



2. Video surveillance @STIB



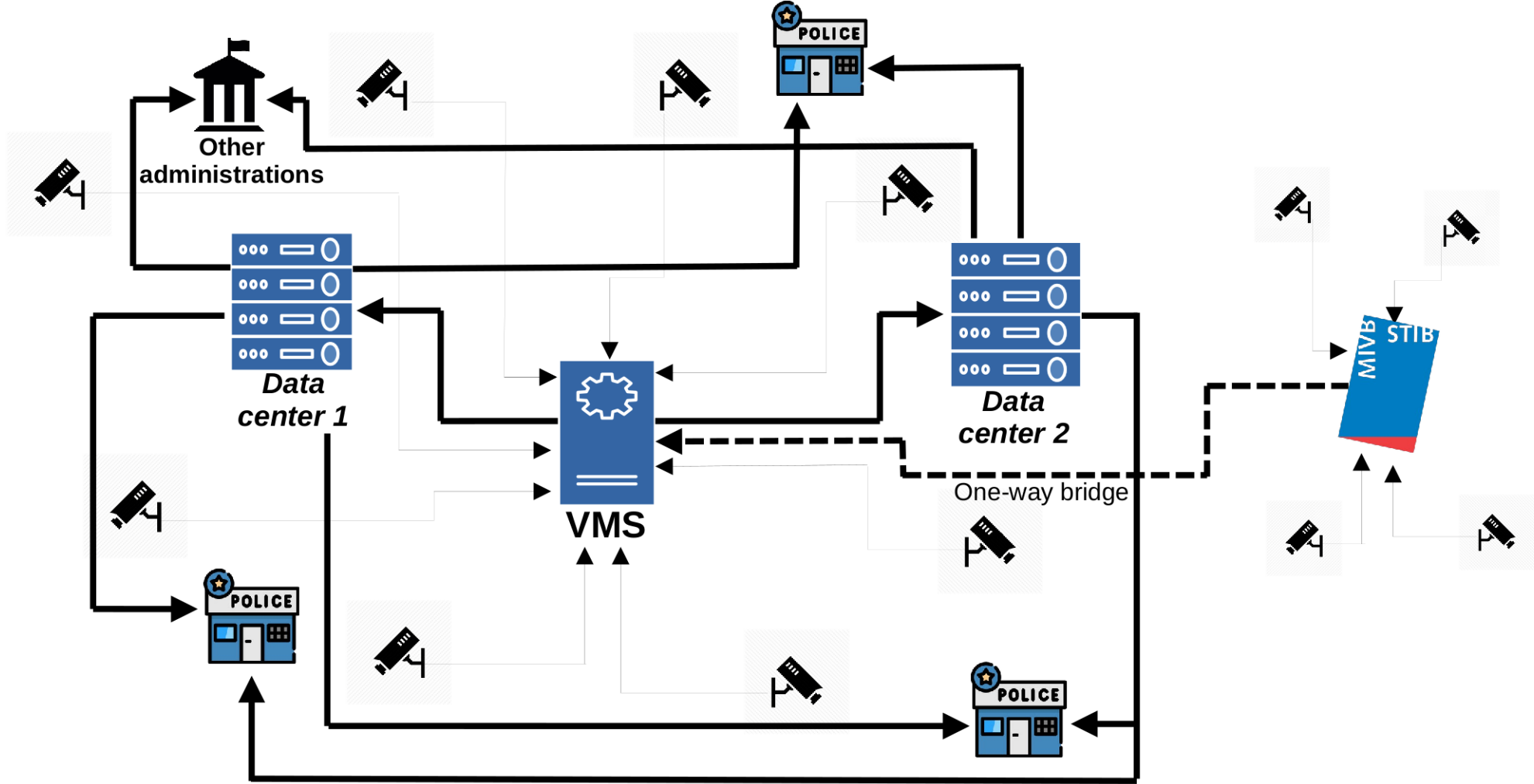
2. Video surveillance @SNCB

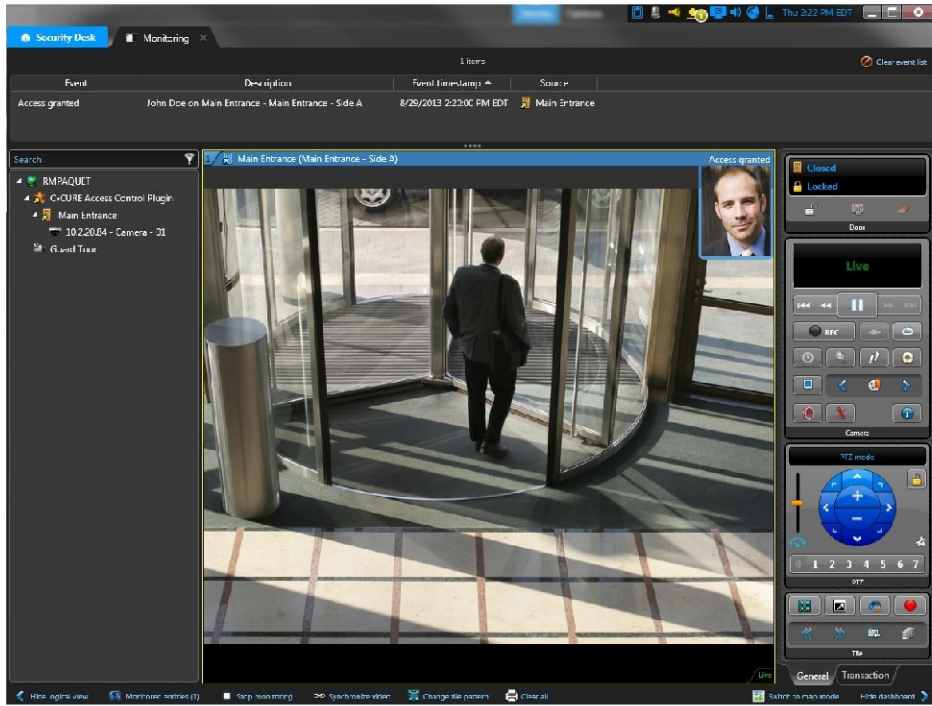


2. Video surveillance @SNCB

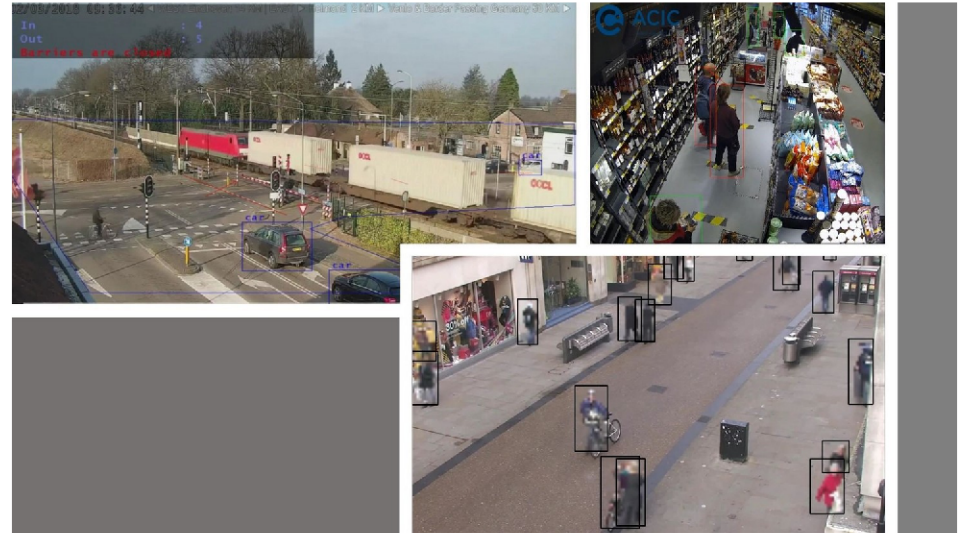


Regional platform for centralising video surveillance





BriefCam



Genetec™

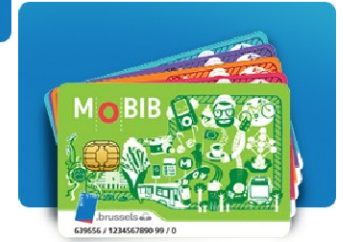
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3. Travel card



MOBIB card

- Introduced by the Brussels PT operator in 2008
- Reloadable
- Either nominative and personal (season + all types of tickets)
- Either anonymous (only 'one-ride' tickets but free to lend it to others)
- Contactless RFID technology
- 5 euros (validity period of 5 years) + costs of tickets
- Compatible with:
 - National Railway Company (SNCB) since 2013
 - Flemish (De Lijn) and Walloon (TEC) PT operators since 2015
 - Car and bike sharing/parking operators



Source:

https://www.stib-mivb.be/article.html?_guid=d02c7fb6-3e9c-3810-248e-ee44ee5ebc8c&l=fr

3. Travel card



Many surveillance/privacy issues since its introduction

- Personal MOBIB is mandatory for the majority of daily PT users
- Freedom of movement and privacy issues: nominative card → makes it possible to track the journeys of each PT user
- STIB always claims to respect privacy legislation (only anonymous data) but,...
- In 2009, the *Information Security Group* (UCLouvain) revealed that several pieces of information were accessible directly on the card without any protection: name, birthday, postcode, last three validations (date, time, bus line, metro station, etc.) and other technical data (transit, total number of validations by the card, date of purchase, etc.)
- In 2010, STIB hired a company to secure the personal data of its customers

3. Travel card



Applications Places System | Mobib Extractor | 12 °C Thu Sep 14, 11:07

File Help | GSI INFORMATION SECURITY GROUP | UCL Université catholique de Louvain

More information

Card number	6396532008374091524		
Card serial number	000000001B93912		
Card manufacturer :	ASK		
Manufactured in :	FRANCE		
Card initialisation date :	12/04/2008		
Number of contracts	1		
Last contract purchase	28/11/2008		
Contract type	Day subscription		
Remaining travels	-		
Validation	1	2	3
Transport	Metro	Metro	Metro
Ligne	1A	1A	1A
Station	Beaulieu	Demey	Hermann-Debroux
Direction	No info	No info	No info
Date	28/11/2008	28/11/2008	28/11/2008
Time	16:30	16:38	16:47
Number of travelling people	1	1	1
In transit ?	YES	YES	YES
Travel transit counter	5	6	7
Date of the first transit	28/11/2008	28/11/2008	28/11/2008
Time of the first transit	15:52	15:52	15:52
Total validations counter	38	39	40

Remark: The mentions "No info" or "Unknown" indicated that the corresponding information cannot be retrieved.

Validation 1 2 3
Transport Metro Metro Metro
Ligne 1A 1A 1A
Station Beaulieu Demey Hermann-Debroux
Direction No info No info No info

More information

Mrs TANIA MARTIN
Born on 18 / 05 / 1983
Living in 1348 (zipcode)

You have validated 40 times your card

Bus ne desservant pas tous les arrêts / Bus does not stop at every halt
Ligne de chemin de fer (SN/NCB) / Spoorlijn (NMBS)
Gare Station
Lignes historiques (exploitées par le MTUB asbl) / Historische lijnen
Railway line (SN/NCB) / Eisenbahn (NMBS)
Railway station / Bahnhof
Historical route (runned by the MTUB asbl) / Museumslinie

Source:
<https://github.com/zoobab/mobib-extractor>

3. Travel card



Today situation

- The card must be validated when entering PT infrastructure and when changing vehicles, otherwise a fine may be imposed
- Purposes of processing validation personal data:
 - (Technical) management of tickets
 - Fraud management
 - Statistical management (passenger flows to adapt PT offer)
 - Determining the amount of regional subsidies
 - Provision of a declaration of use
- Non-anonymous personal data stored for six months, then anonymisation
- Transmission of data to the police at the request of an investigating judge
- In 2020, a Brussels court ruled that this systematic collection of validation personal data was incompatible with the GDPR

3. Travel card



Right of access request (GDPR)

- All contractual personal data and

Date and time of validation	Place of validation	Type of validation	Remaining journeys
12/04/2022 17:53	Stat. BOURSE	Entrance	6
12/04/2022 18:14	Stat. MONTGOMERY E.O.	Interchange	6
13/04/2022 00:18	Stat. MAELBEEK	Entrance	5
14/04/2022 09:12	Stat. BOURSE	Entrance	4
14/04/2022 09:47	Stat. ETANGS NOIRS	Interchange	4

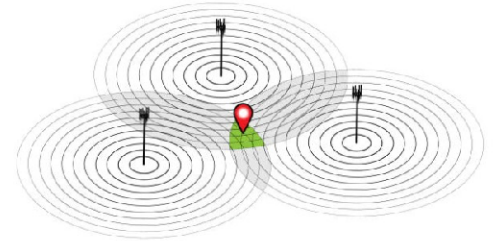
- No exit time/place from PT infrastructure

4. Telephone data



Telephone connected to the network = telephone geolocated (even if GPS is disable)

- Operator knows location in real time → nearest antenna/triangulation of antennas to which the phone is connected
- Precision depends on technology/environment
- SIM card = unique identifier linked to your ID
- Possibility to track in real time the movements of PT users
- The largest operator (Proximus) sells this aggregated geolocation data to the regional administration in charge of mobility (Brussels Mobility), which then uses it with the regional PT operator (STIB) in order to monitor passenger flows
- Belgian data retention law requiring retention of telecommunication data of every citizens for security purposes during 1 year was ruled contrary to fundamental rights by CJEU in 2020



5. Data sharing - MUNTSTROOM project

'The Muntstroom PCP Group would like to develop and test a solution to visualise 24/7-people flow (counting, direction, speed), facilitate shared big data-analytics and make the People Flow-data available for a wide array of users.'

'The Muntstroom project is initiated by four public buyers: STIB-MIVB (lead), CIRB-CIBG, Brussels Mobility and parking.brussels. Those public buyers would like to be the launching customer for an integrated end-to-end solution for the outdoor and indoor monitoring of people flow. Indeed, research showed that the desired integrated solution, and specific elements thereof, do not yet exist.'

Source : www.muntstroom.brussels

4 project partners



(lead)



With the support of



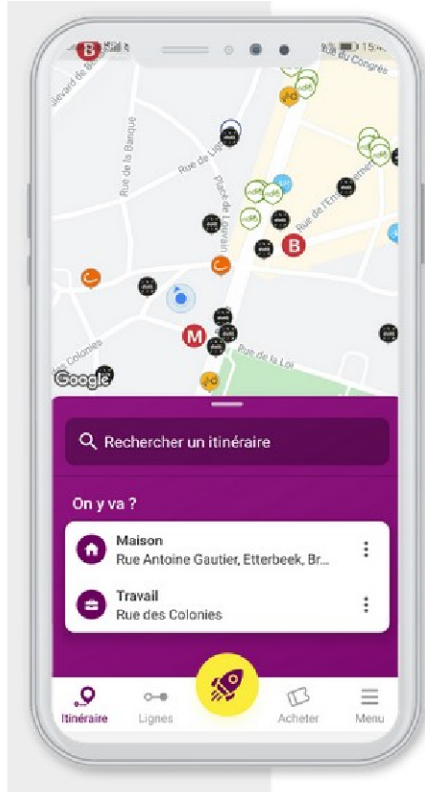
For the outreach to marketparties and supporting matchmaking



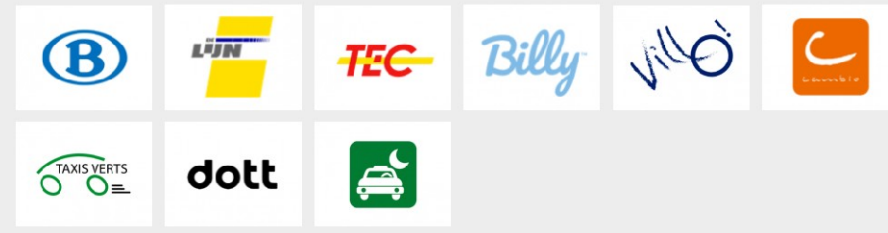
.AGORIA



5. Data sharing - MaaS



PARTENAIRES DE MOBILITÉ



6. Conclusion

Today situation

- Multiplicity of surveillance practices justified by the terrorist threat and the improvement of PT efficiency
- Many processing of personal data of PT users recently considered illegal (travel card, telephone data, facial recognition, etc.) → confusing situation where the privacy regulation is not respected
- Willingness to share more and more personal data between PT actors and also between private and public stakeholders → risk of increased surveillance

In the coming years

- How can the centralisation of personal data and the risks of surveillance be limited as much as possible?
- Reaffirming the boundary between the public and private sectors?
- What are the social impacts of the increasing automation of these surveillance processes in the long term?