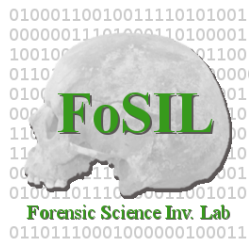
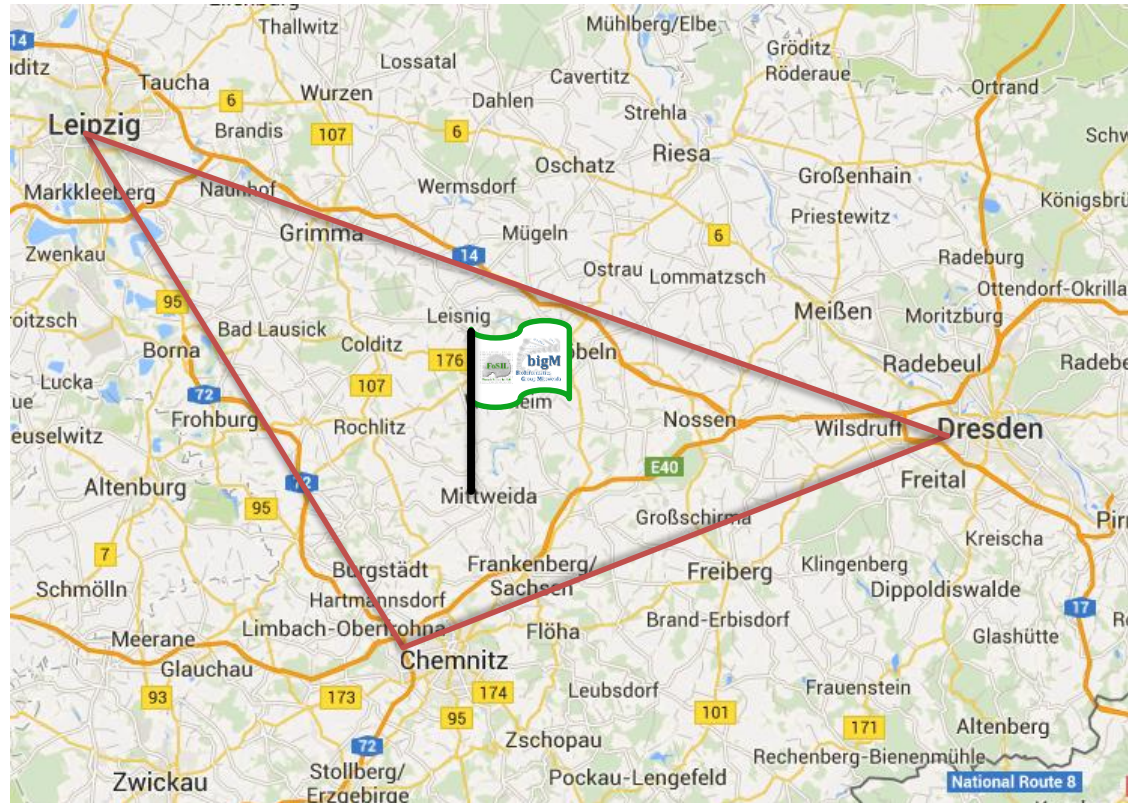


**„Something, that is allegedly secure
is not necessarily secure,
Something, that is allegedly known
might turn out to be unknown.
Appearance can be deceptive,
our senses can deceive us.
Even though experience and knowledge
can limit errors,
reality also limits those.“**

Inspired by Berthold Brecht

Author: unknown



16 members
10 PHD students
+ Master and Bachelor students





DataSys 2017

June 25 - 29, 2017 - Venice, Italy



$P(\text{Security}) = 1 - P(\text{Crime})$

Is security the absence of crime?

Dirk Labudde and Michael Spranger

Sonntag, 9. Juli 2017





Germanwings Flight 9525,
March 24, 2015

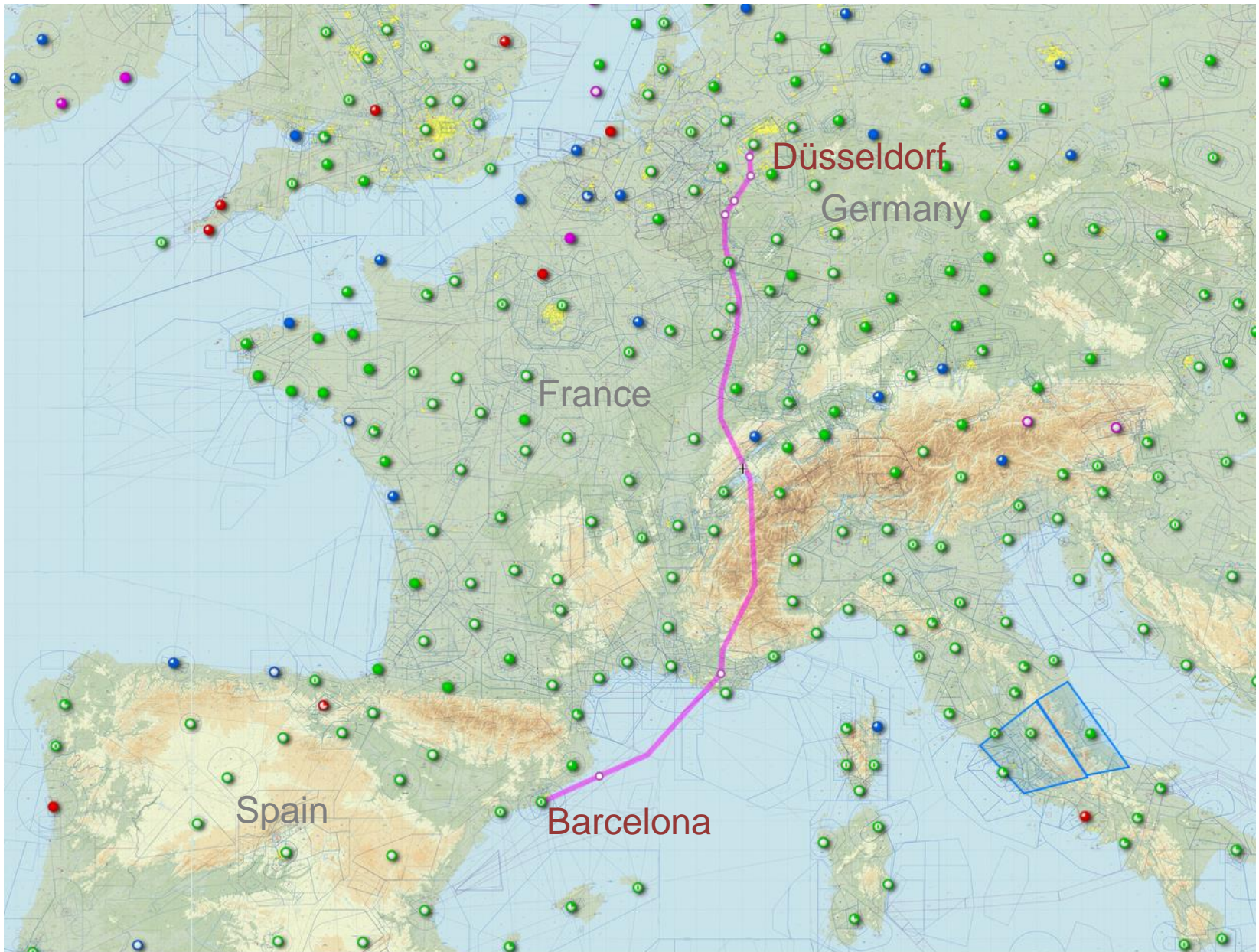


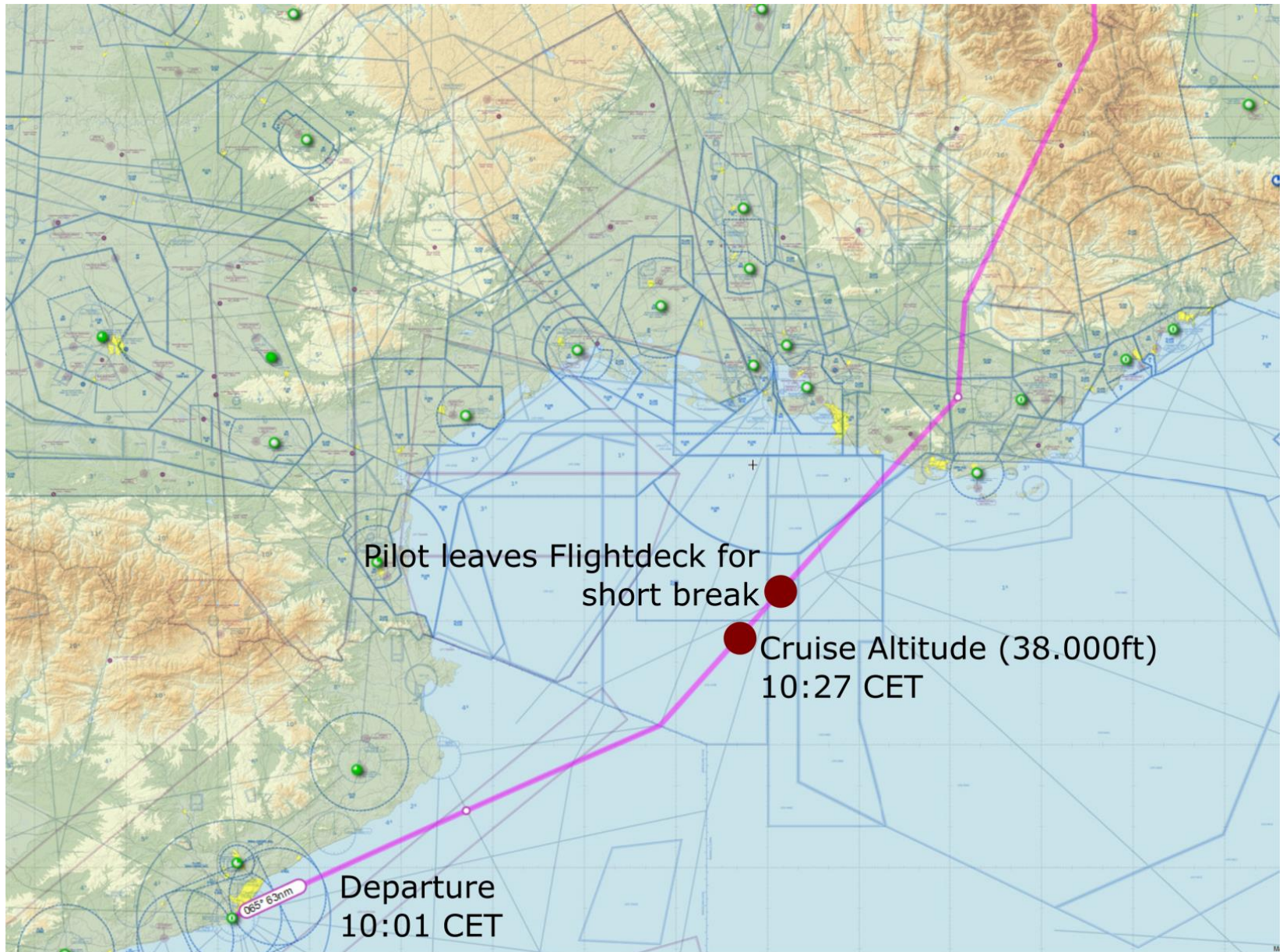
2017 terrorist
attack London

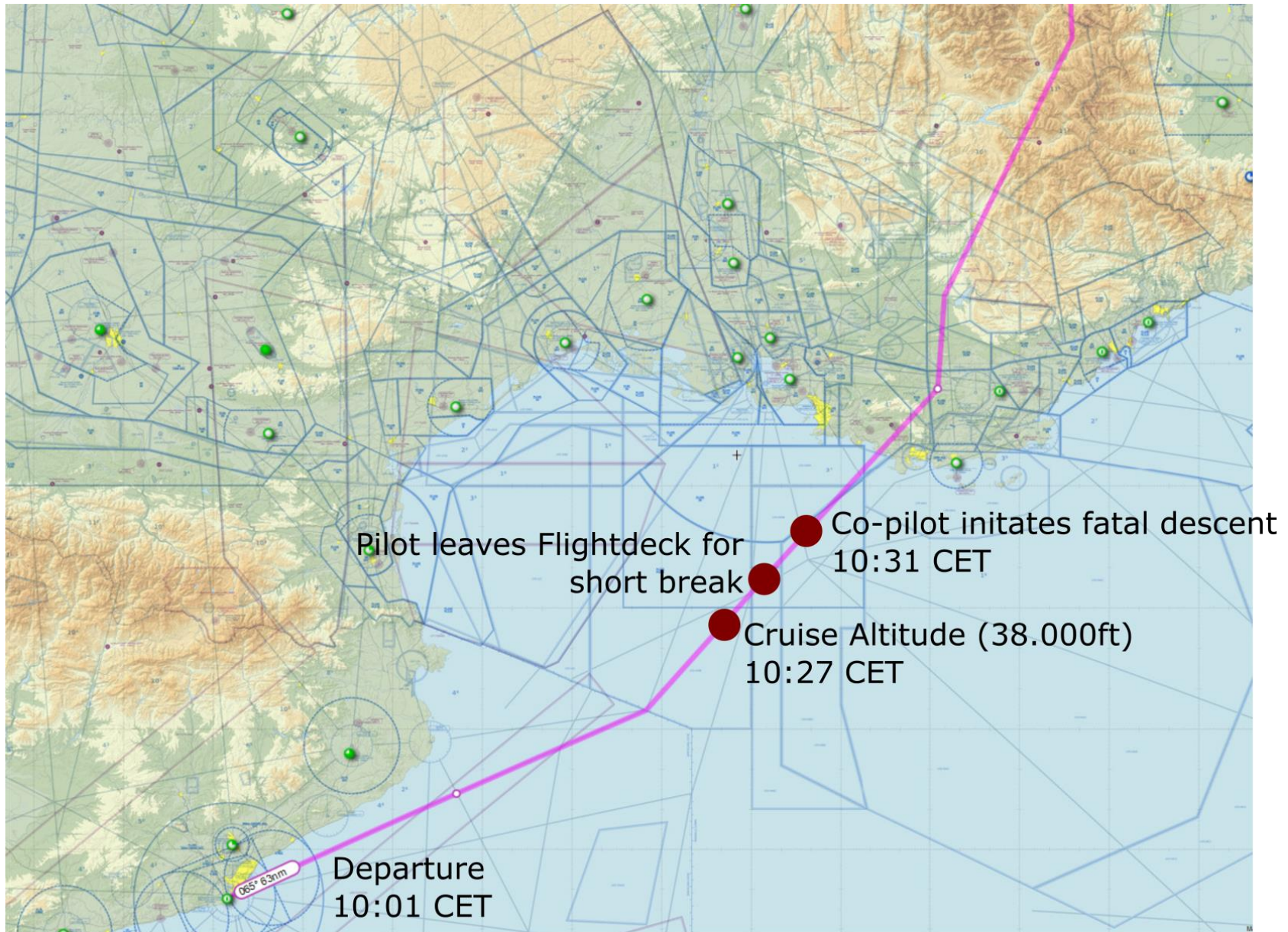


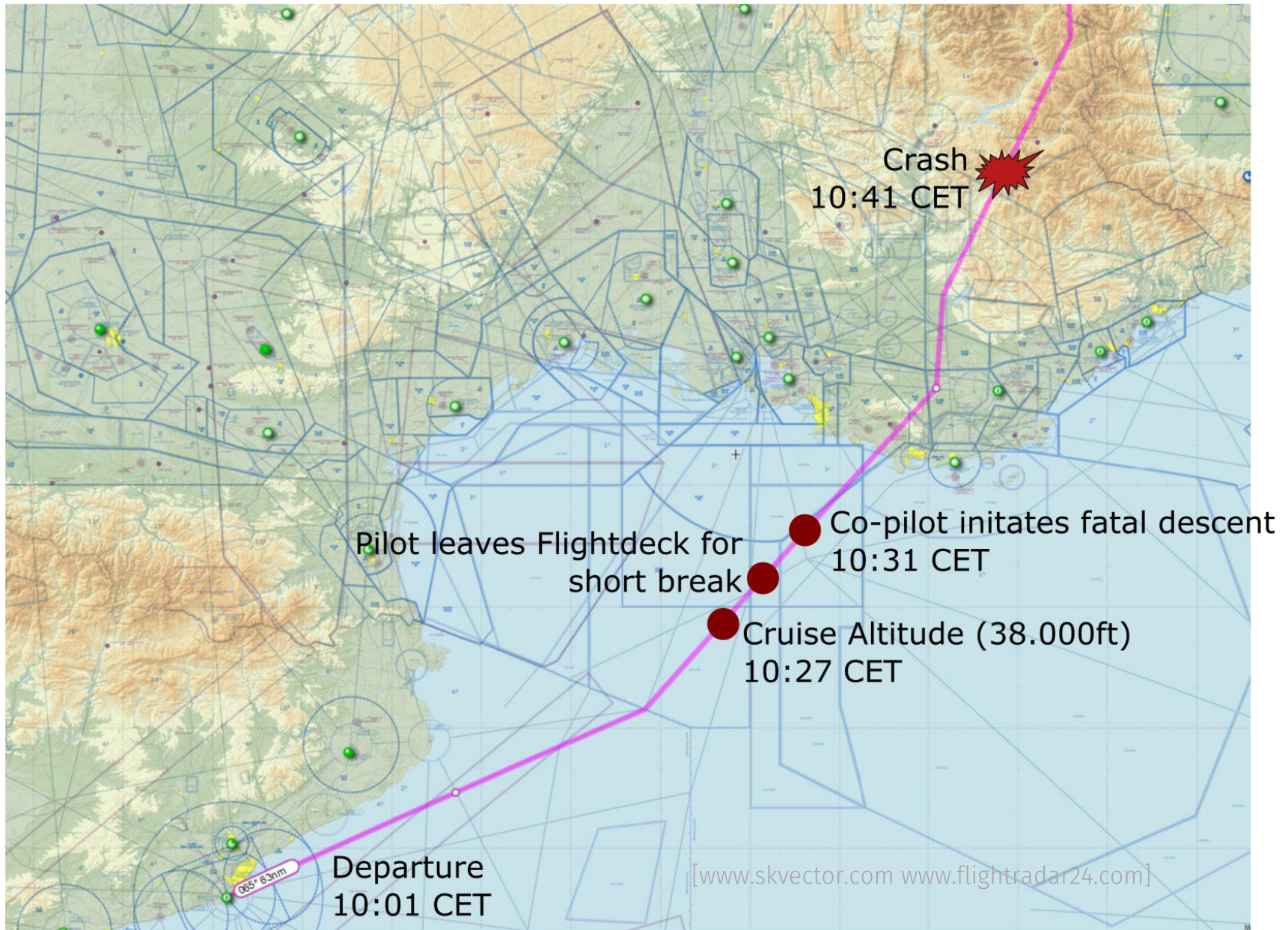
2016 attack on a Swiss train











What does security mean in this context?

*Security means protection of humans
or things from humans.*

What does crime mean in this context?

Violating the right of physical and psychological integrity and sacredness of property.

Can we model security by simulating crime?

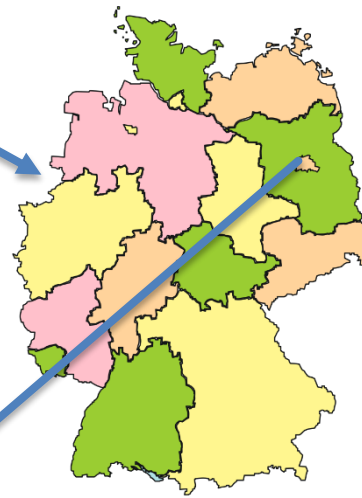
$$P(\text{Security}) = 1 - P(\text{Crime})$$

Is security the absence of crime?



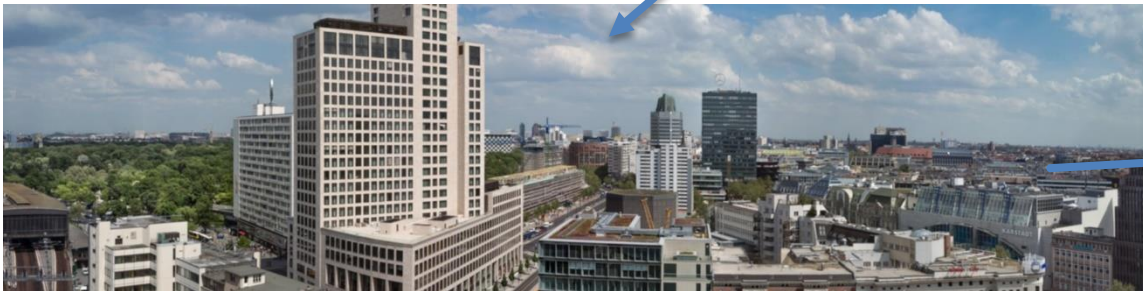
International security interests

- Terror
- Civil war
- Plane hijacking



National security interests

- Extremism
- Amok
- Organized crime



Regional security interests

- Burglary series



Personal security interests

- Burglary



technical security
legal security
perceived security



Actors

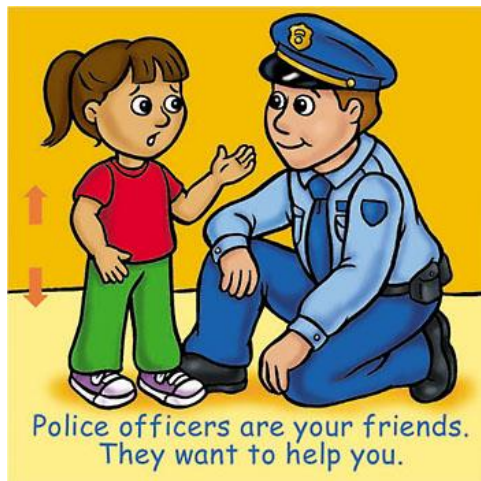
residents, neighbors



Urban Structure

Law and Order

Right to physical integrity
Inviolability of the home
data protection



Approaches

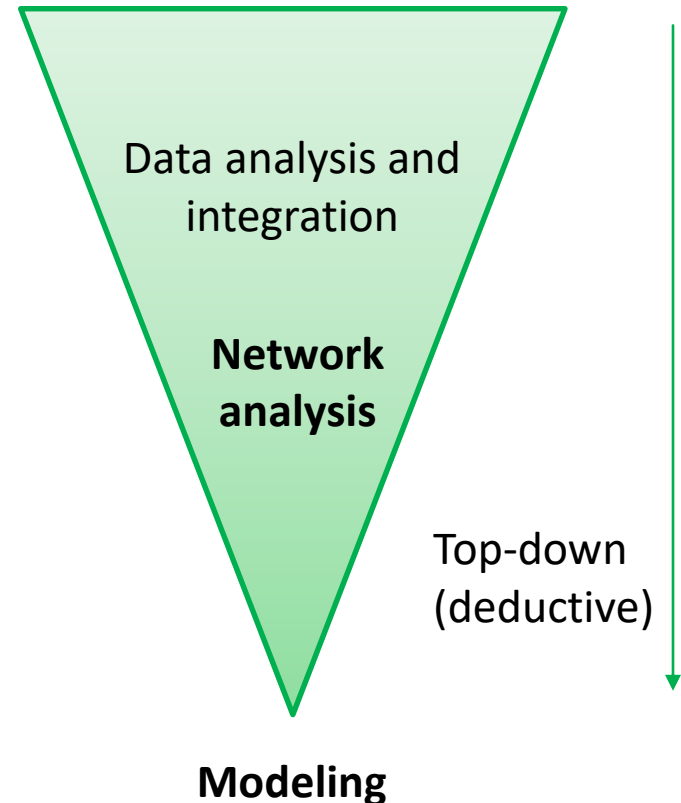


Approaches for security from the system theory Methods in information gathering

Top-down (deductive)

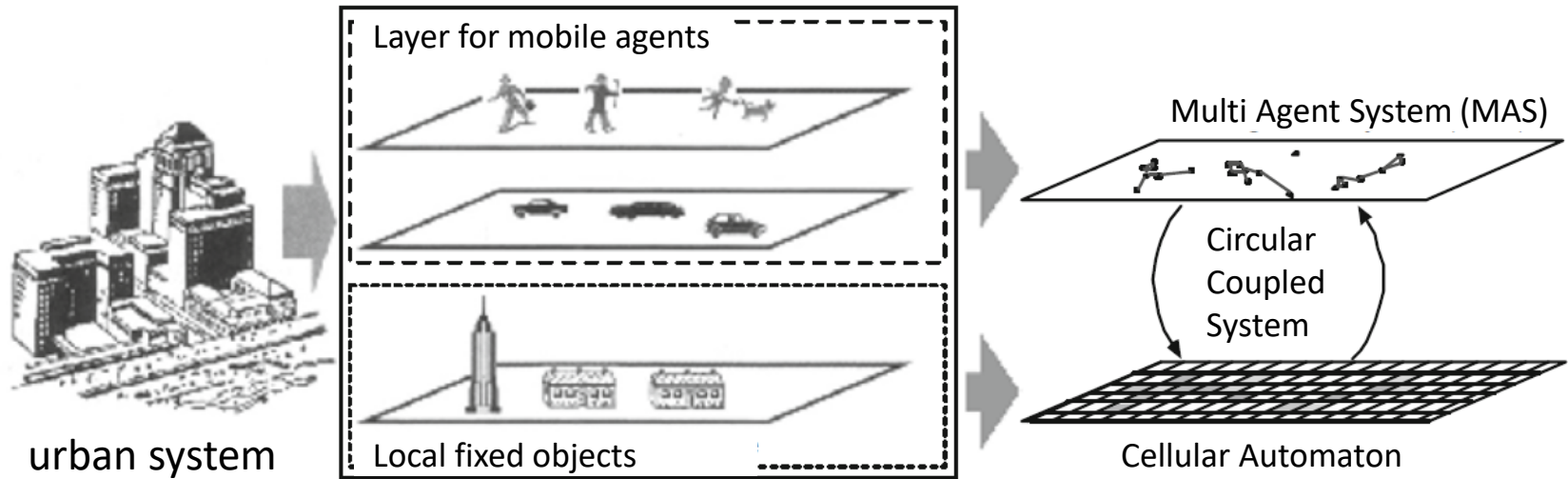
- Creating experimental data
- Analysis of data and formulation of hypotheses (iterative)
- Validate hypotheses by means of experiments (iterative)
- Goal: Identification and characterization of new mechanisms leading to a better understanding of the complex relations in a „populated urban structure“
- Integration in the resilience process

Measurement of overall condition



A **Simulation** is an approach used for the **analysis** of systems which are too complex to be analyzed theoretically or with formulas. This is mostly the case for **dynamic system behavior**. In a simulation, experiments are performed with a model in order to gain knowledge about the real system.

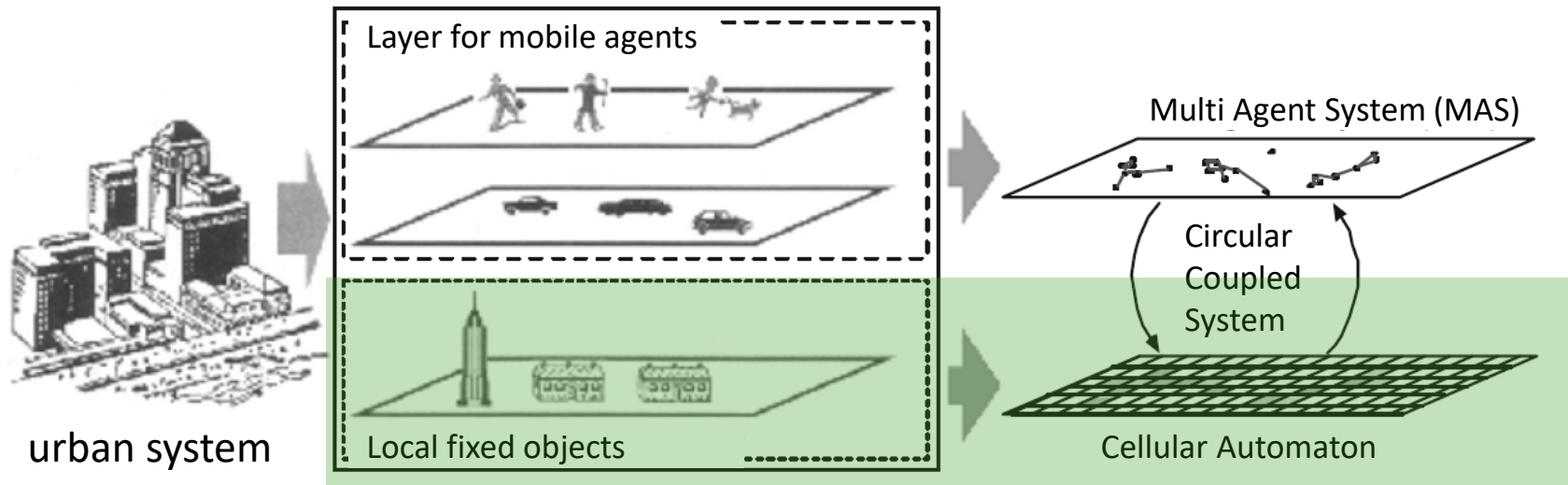
- Discovering of network structures on different levels
 - Gathering of the temporal and spatial dynamic of „cellular/system“ components using different (environmental) conditions
 - Development of detailed mathematical models
 - Visualization of networks and the processes taking place within those networks
- > Understanding of the processes as a whole



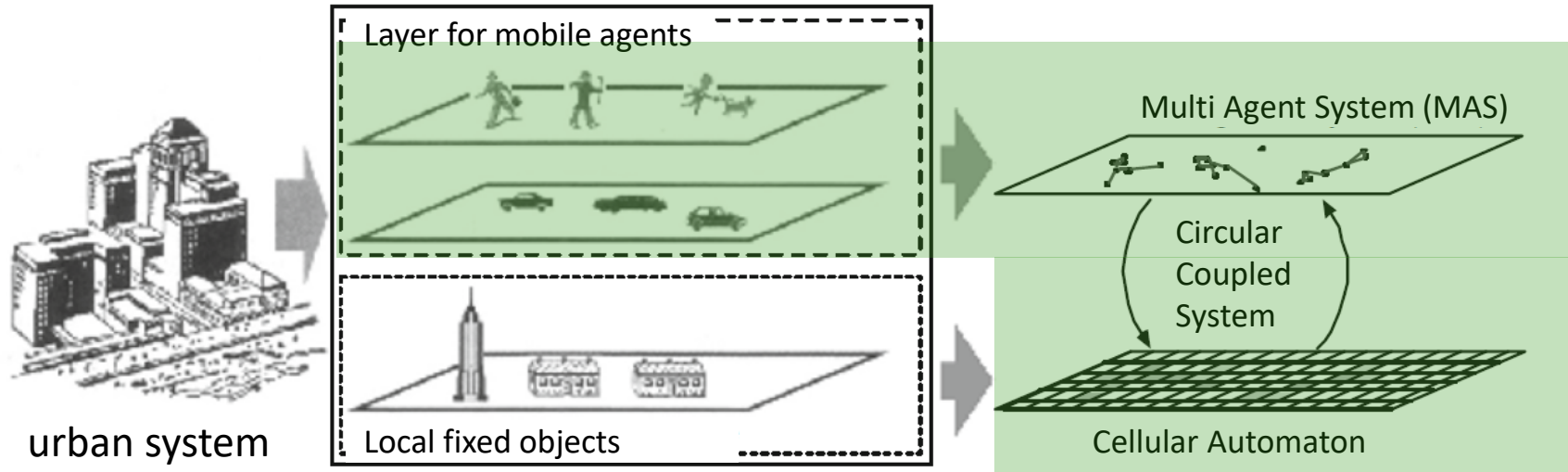
Cellular automata and multi-agent systems can be used for the simulation of the dynamic of **spatial processes**.

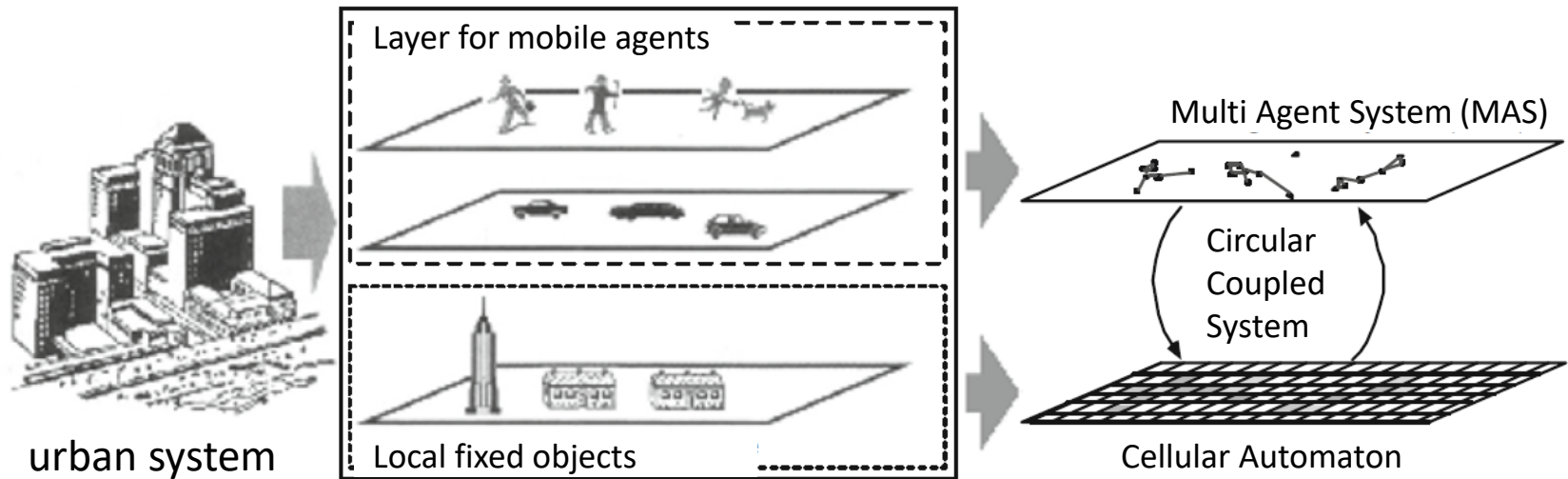
Cellular automata

Cellular automata model spatial elements such as streets, parcels of land, and buildings. Those are treated as locally fixed objects, whose state can change at a certain point in time. In a first step, these elements are transferred to a cell of a regular grid and saved as the status of this cell.



A second level includes the individual and collective urban actors, which will be called agents. In comparison to the cells, agents are mobile and can move freely through the cell grid, the cellular room. It is possible to define different types of communication between the agents and between the agents and the cell.

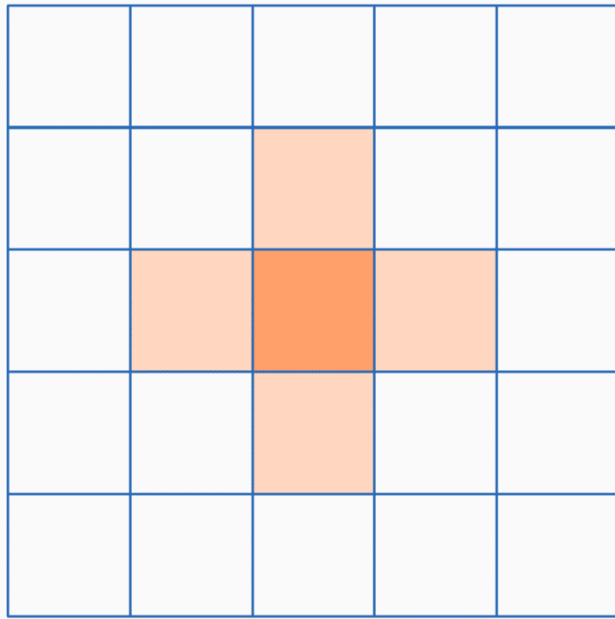




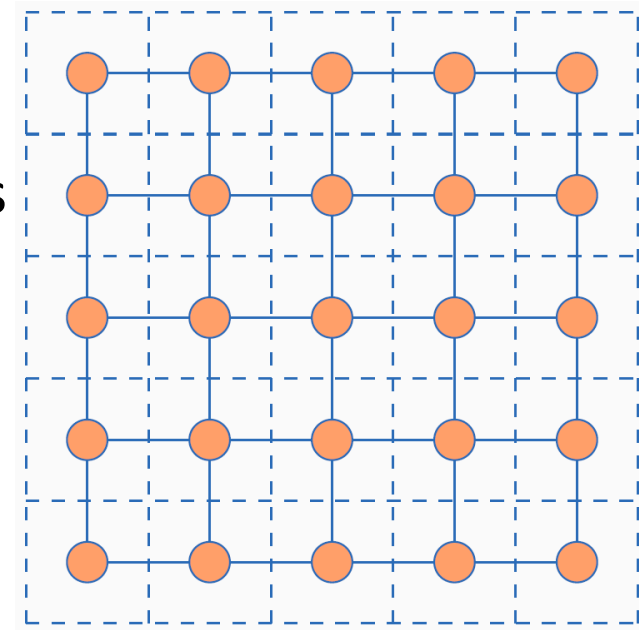
Model of an urban system. The system is separated in different levels, which are represented either by the cells of a CA or the agents of the MAS.

Ideas for Implementation

$$P(\text{Security}) = 1 - P(\text{crime})$$



Definition of neighbors by means of a graph



Cellular Automata

- Interaction with neighboring cells in a fixed grid
- Neighborly relations have to be determined at the beginning

Graph Automata

- Neighbor geometry can be flexibly modified
- Neighborly relations can change at any time

Near-repeat pattern analysis

Question:

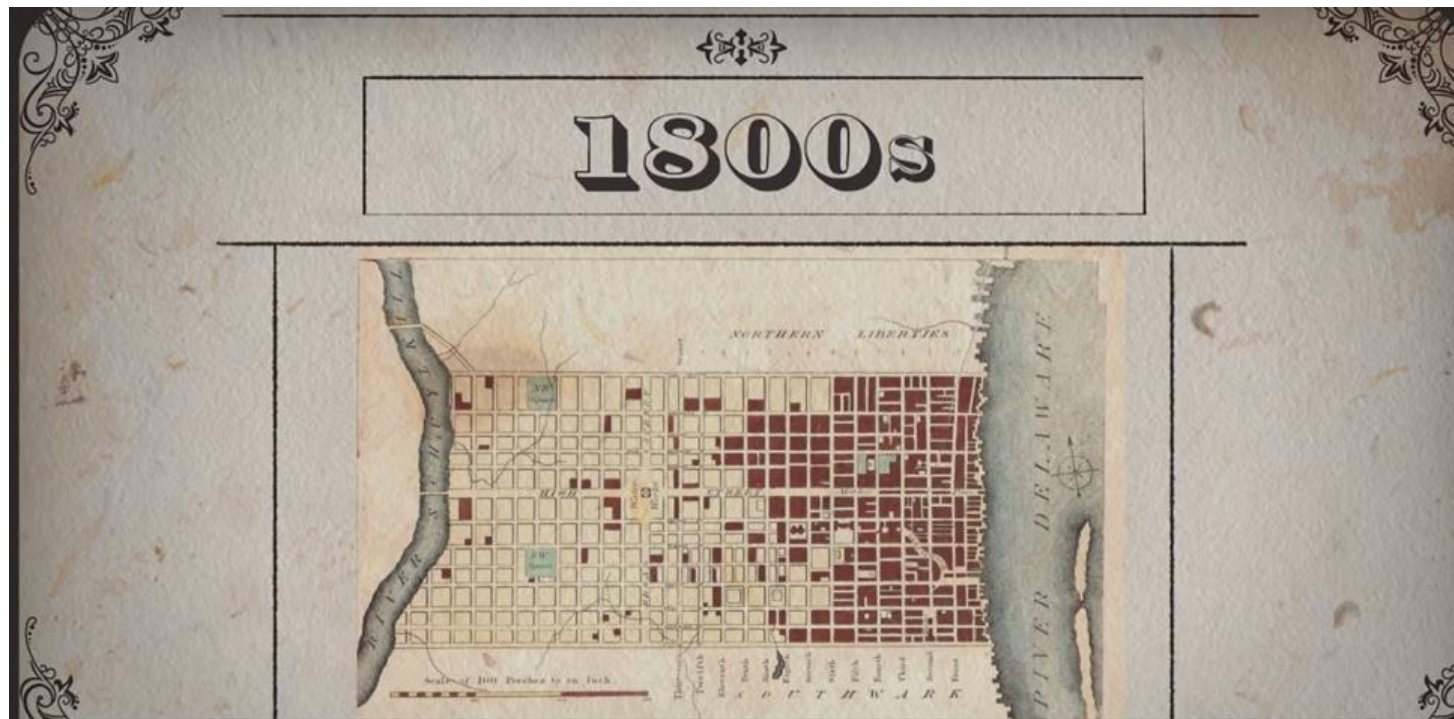
When a criminal event takes place, how does the risk develop in the surrounding area?

→ Repeated attacks at the same or nearby places

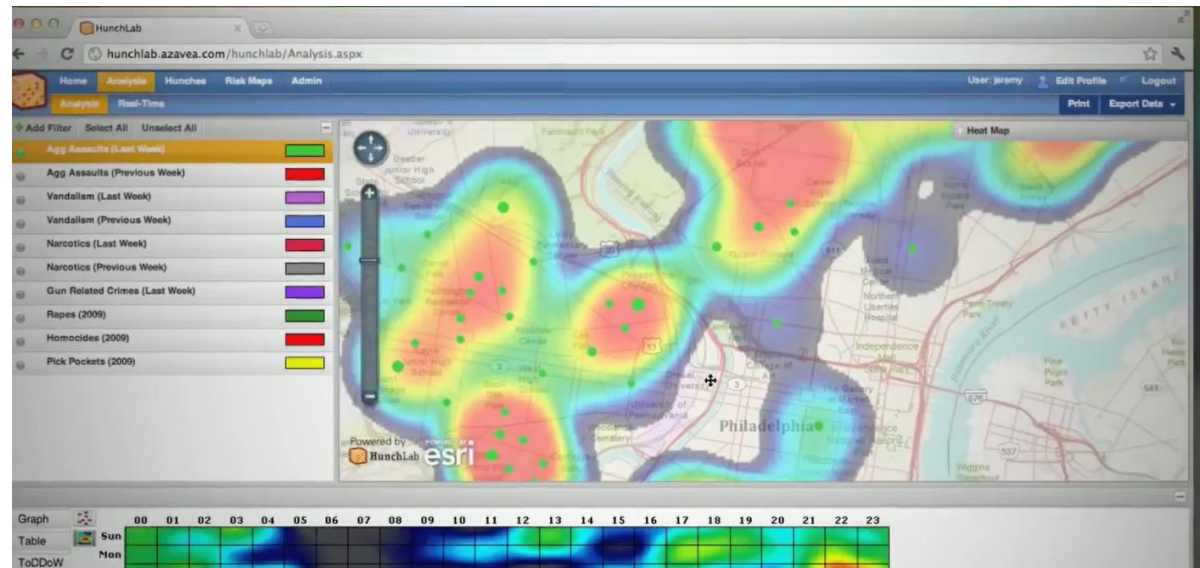
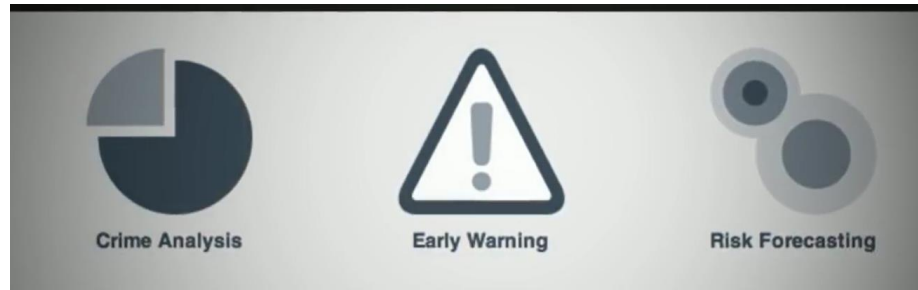
$$P(A|x, t) \rightarrow P(B|x + \Delta x, t + \Delta t)$$

What influence does an assault A at the place x at the time t have at a later point in time $t + \Delta t$ and a nearby place $x + \Delta x$.

Relations for time and space can be derived from statistics.



First „statistic of criminal activity“ – people mark crimes on a map.
Basic idea – divide in quadrants (grid)



Number of criminal offences and their „circumstances“

Near-repeat pattern analysis

Odds Ratios

	0 to 15 days	15 to 30 days	30 to 45 days	45 to 60 days	60 to 75 days
Same location	2.6803	0.9033	0.6894	0.4331	0.6208
0 to 121.92 meters	1.2824	1.1158	0.8223	0.9218	1.0476
121.92 to 243.84 meters	1.1851	0.9325	1.0807	0.9207	0.8254
243.84 to 365.76 meters	1.1203	0.9448	1.0811	0.9923	0.851
365.76 to 487.68 meters	1.065	1.0754	0.9932	0.9271	0.8171
487.68 to 609.6 meters	1.149	1.0396	0.9577	1.002	0.9482
609.6 to 731.52 meters	1.0259	1.0772	0.9504	0.9865	1.0612
731.52 to 853.44 meters	1.0309	1.0922	1.046	0.9247	1.0202
853.44 to 975.36 meters	1.0423	1.0727	1.0303	1.0683	0.9943
975.36 to 1,097.28 meters	1.0666	1.0307	1.0631	1.0236	0.9784
1,097.28 to 1,219.2 meters	1.0027	0.9971	0.9834	1.0447	1.04
> 1,219.2 meters	0.9943	0.997	0.9993	1.0004	1.0019

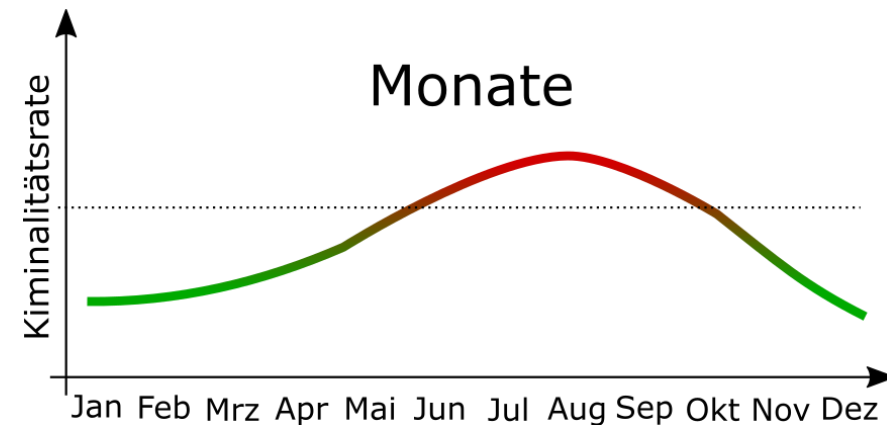
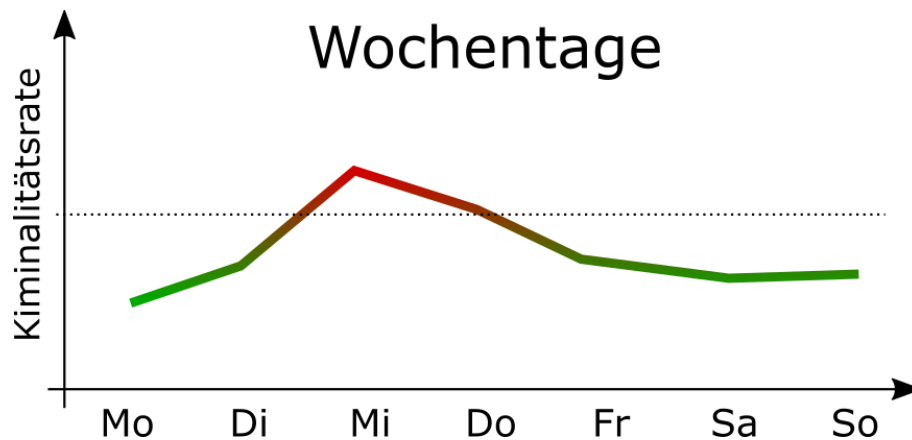
Near-Repeat Patterns in Philadelphia Shootings. Jerry H. Ratcliffe and George F. Rengert, Security Journal 2008.

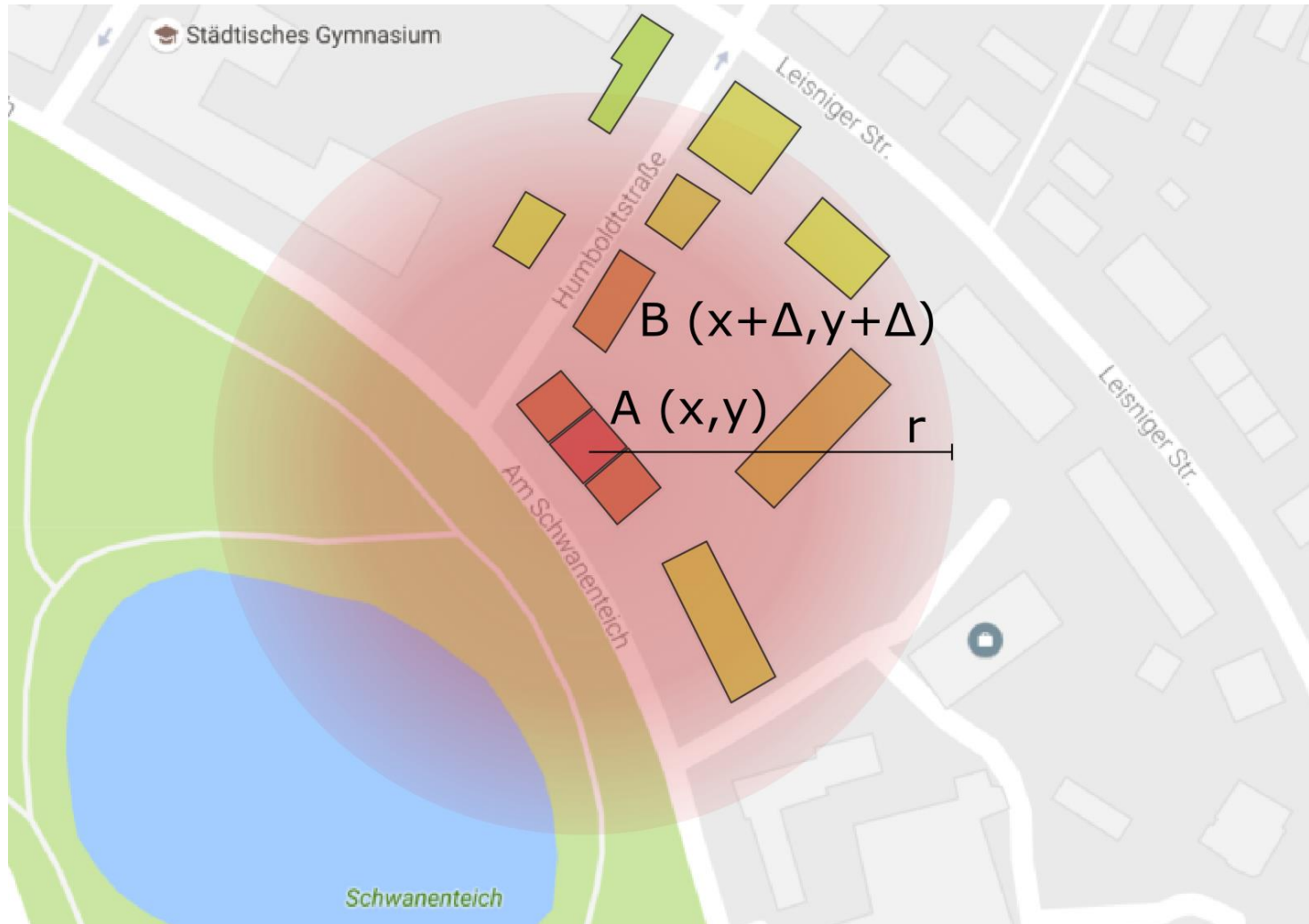
Cyclic-load forecasting

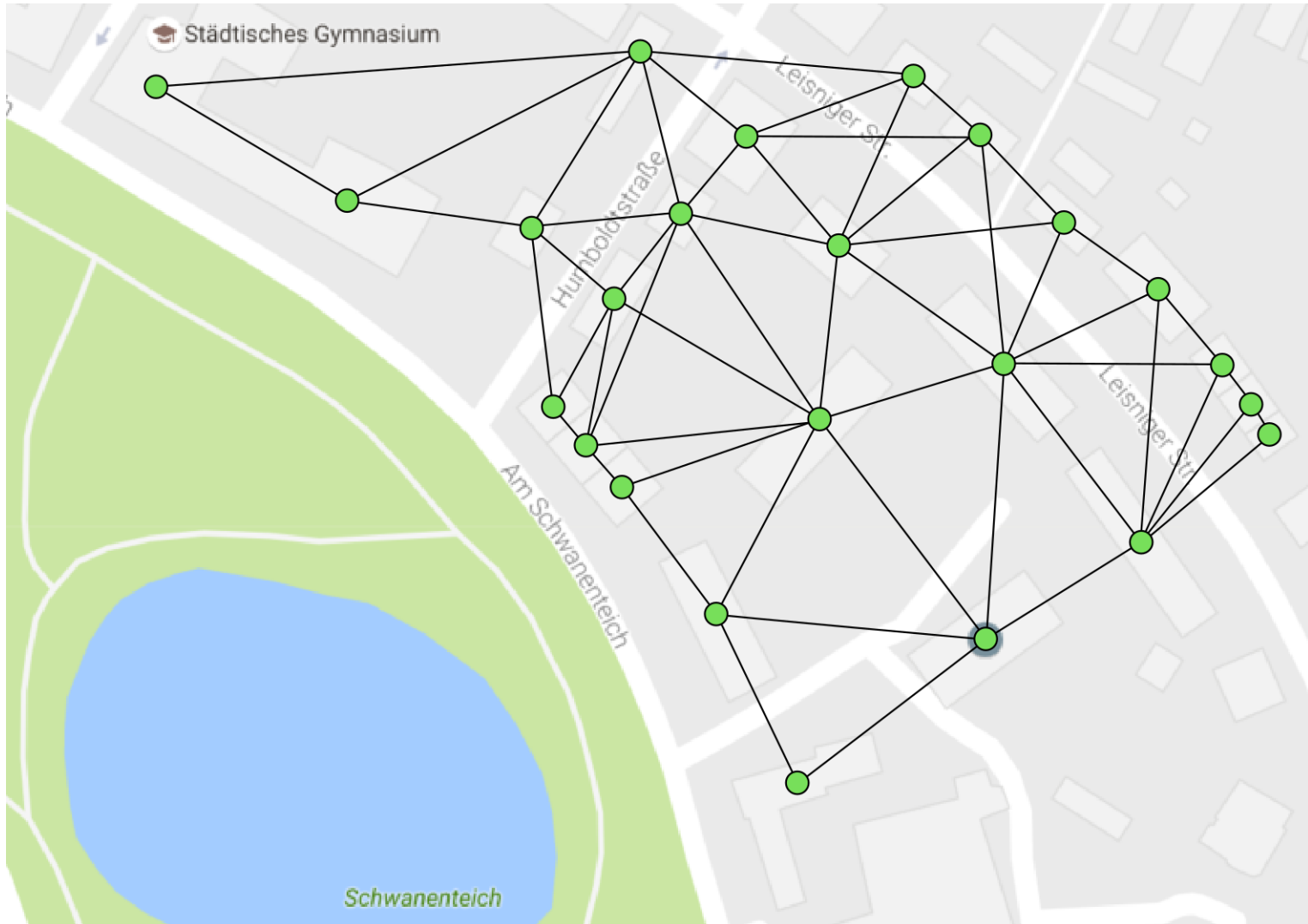
Question:

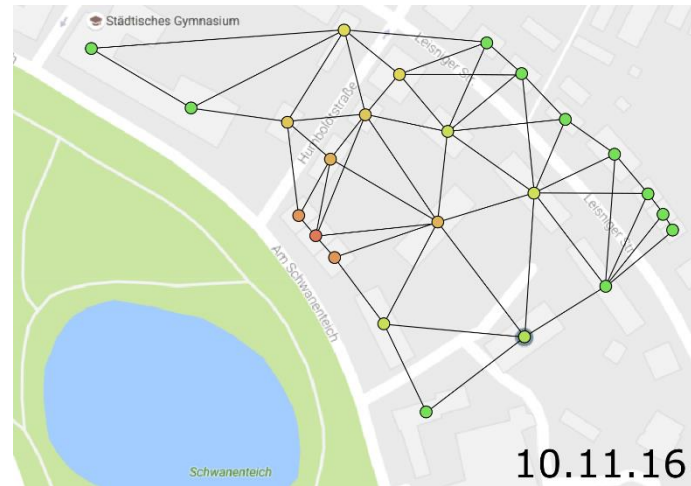
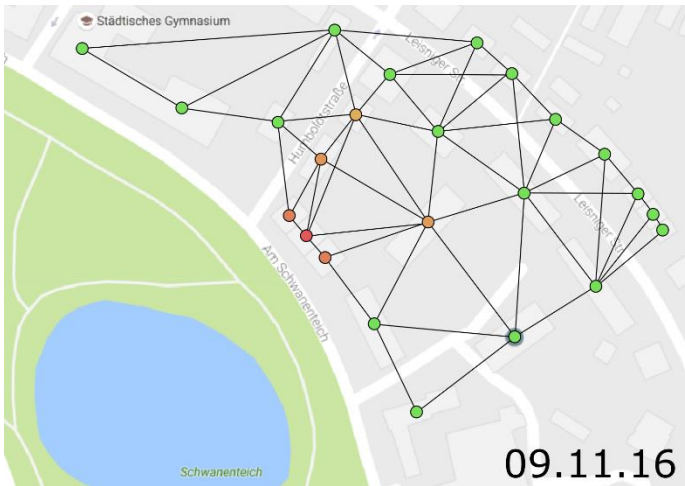
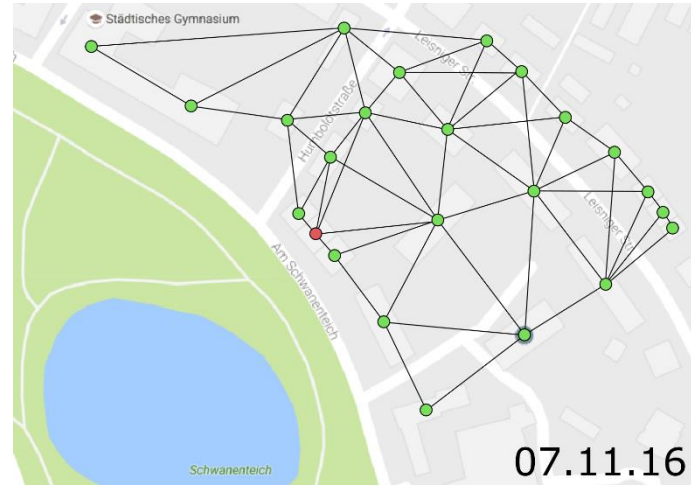
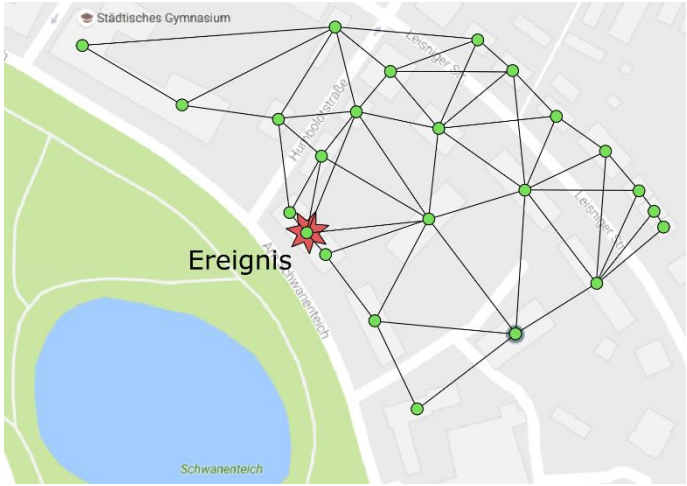
Are there certain days in the year, certain days of the week or certain times in the day in which more criminal incidents are to be expected?

$$\begin{aligned}
 P(\text{Event} | \text{Point in time}) &= P(\text{Event} | \text{Month}) \\
 &+ P(\text{Event} | \text{Day}) + P(\text{Event} | \text{Day of the week}) \\
 &+ P(\text{Event} | \text{Time of day}) + \dots
 \end{aligned}$$

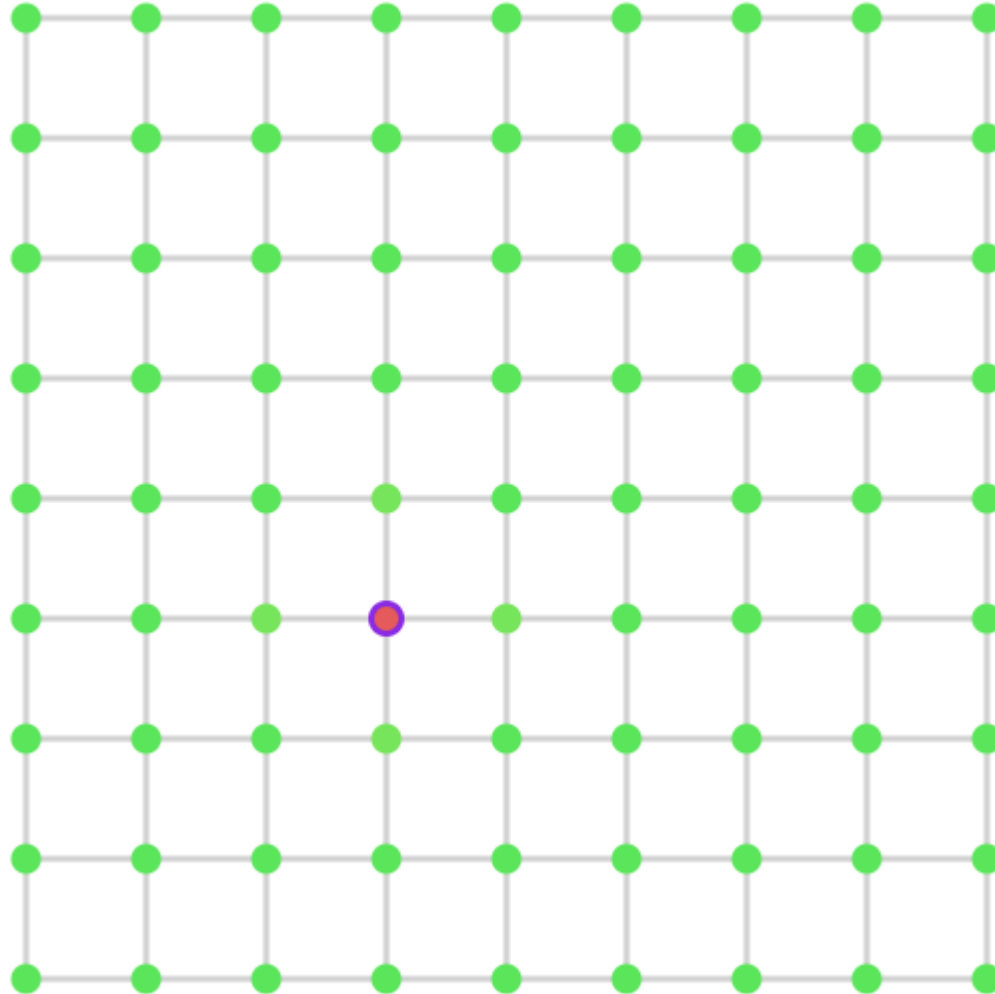


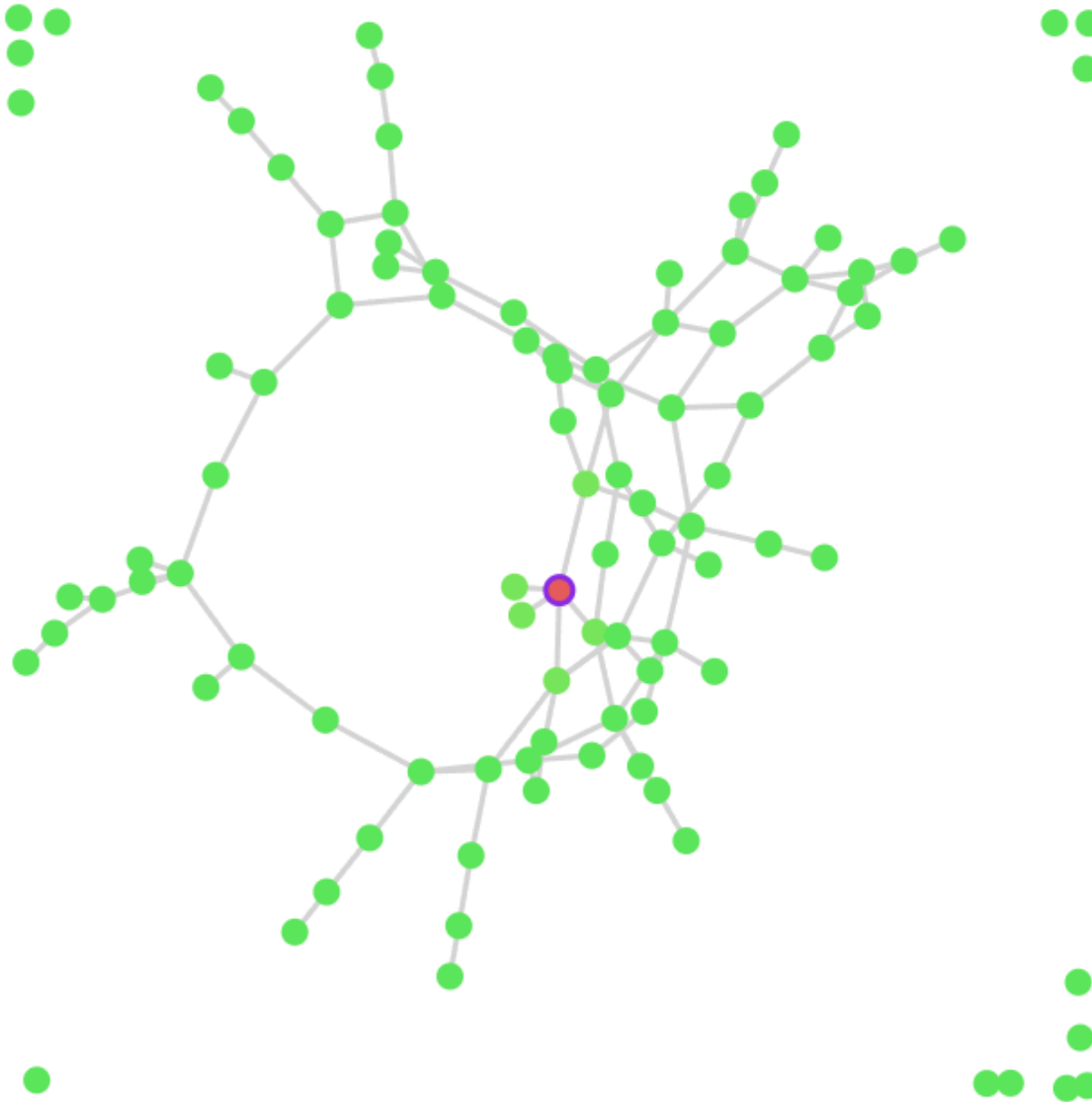






Security of a house in an urban structure with a well defined crime rate



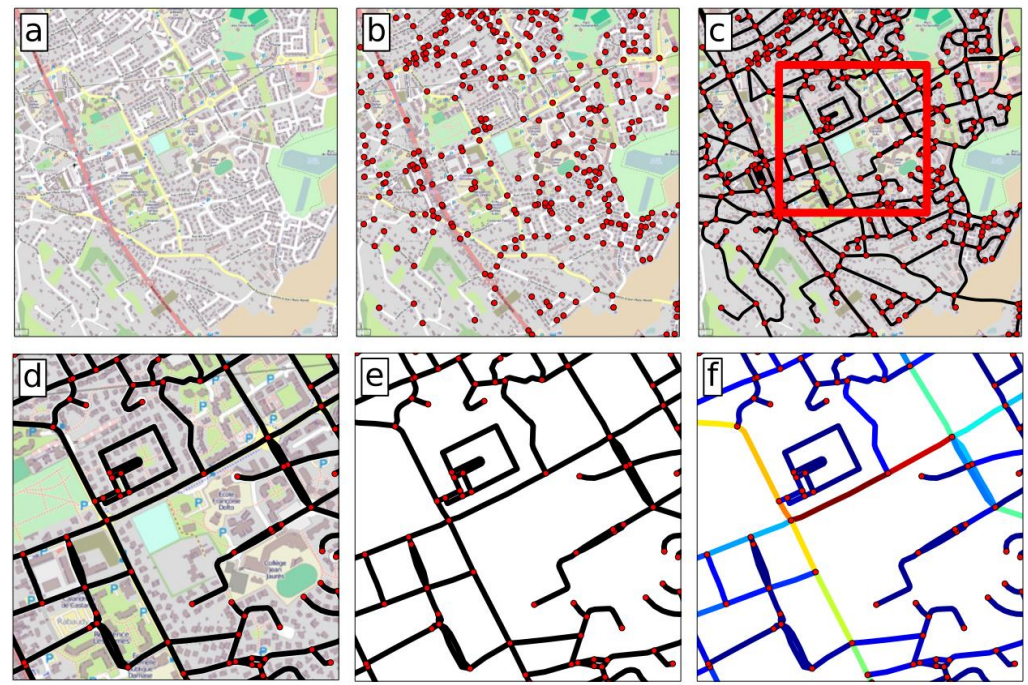
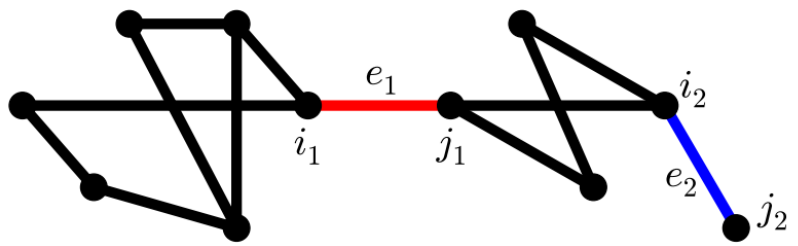


Modelling patterns of burglary on streetnetwork

Primal Representation Modell [Porta et al. 2006]

- Graph $G=(V,E)$
- Intersections of streets are nodes V
- Enclosed segments of streets are the edges E

Betweenness Centrality



model

The risk of a burglary happening at a certain point in time on a specific stretch of road shall be determined -> the risk passes from segments with a high risk to segments with a lower risk

$R_i(t) = S_i + Q_i(t)$ risk -> static and dynamic components

$$S_i = (D_i + W_i)p_i,$$

D_i constant for activities, which cannot be explicitly captured

$$W_i = f(C_i).$$

Activity of pedestrians (in a wider sense) is a function of betweenness centrality (function-> non-linear behavior)

$$p_i = 1 - e^{-B_i \delta t}.$$

Probability of a criminal offence -> probability within a given period of time, determined by the means of the initial attractiveness including a number of decisions by the offender

Breakdown

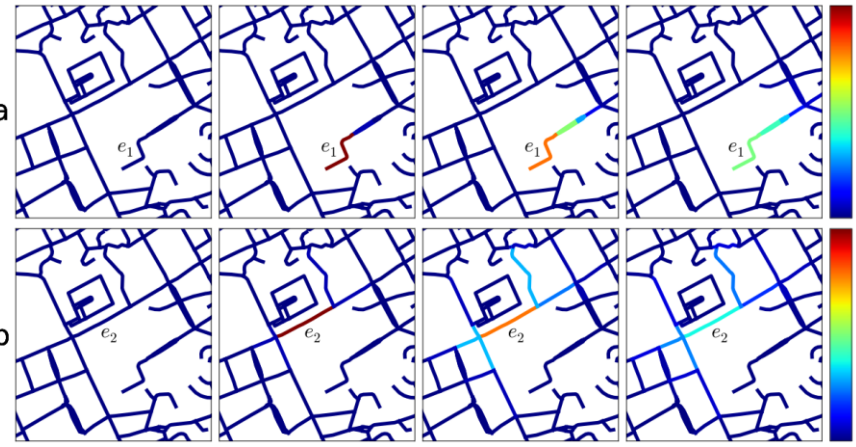
$$\frac{dQ_i}{dt} = \Gamma R_i - \omega Q_i + \eta \sum_j a'_{ij} (Q_j - Q_i)$$

Growth of crime

diffusion from link to link

Modelling patterns of burglary on streetnetwork

diffusion of the risk



Diffusion in different stretches of roads as an answer to burglaries



Balance at proportional statistical risk to C^B



Risk is artificially suppressed

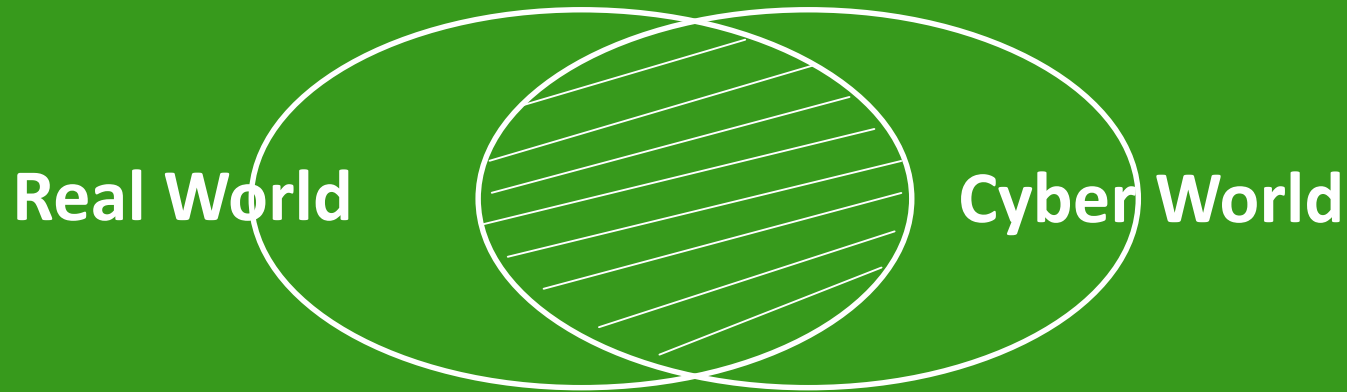


Street is taken out

Results and future work

- Mathematical network model for the simulation of the spread of crime
- Non-linear effects show the significance -> targeted Policing
- Requirement is the presence of relations between network characteristics and crime rates
- Even though an empiric basis was developed, there have been no analyses with the presented metrics
- Next steps:
 - Creating a model showing the consequences of the predictions made for the organization of police operations
 - statistical analyses
 - Influence of the network configuration on the phenomenon of the near-repeat victimization
 - Implementation in practical police work

This is what defines us... Our Identity



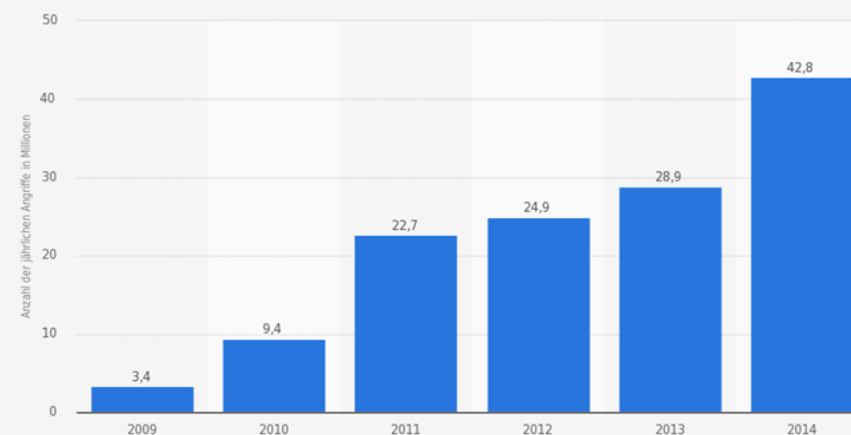
Separation?



Hacker hits on U.S. power and nuclear targets spiked in 2012

Number of annual cyber attacks in the years 2009 to 2014 (in millions)

Anzahl der jährlichen Cyberangriffe weltweit in den Jahren 2009 bis 2014 (in Millionen)



Source: PwC © Statista 2015

Weitere Informationen: Weltweit: 27. März bis 25. Mai 2014; Mehr als 9.700; (Sicherheits-)Technische Leiter, Geschäftsführer etc.



2013: using a hacked account of the US news agency AP, hacker spread the news that of an explosion in the White House → within minutes the Dow Jones loses about 1 %

2012: within 45 minutes the publically traded company Knight Capital loses US\$ 440 Million because of a flawed computer software (Malware) → Shares lose 75 % of their value



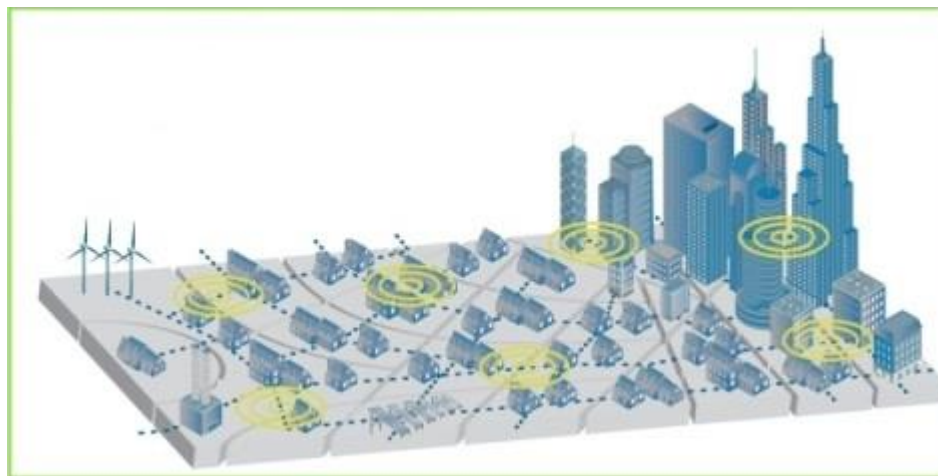
Communication and content have changed due to the digitalization.

Digital identity and real identity

Modern ways of communication is not only used in order to perform criminal acts, yet especially to plan criminal activities.

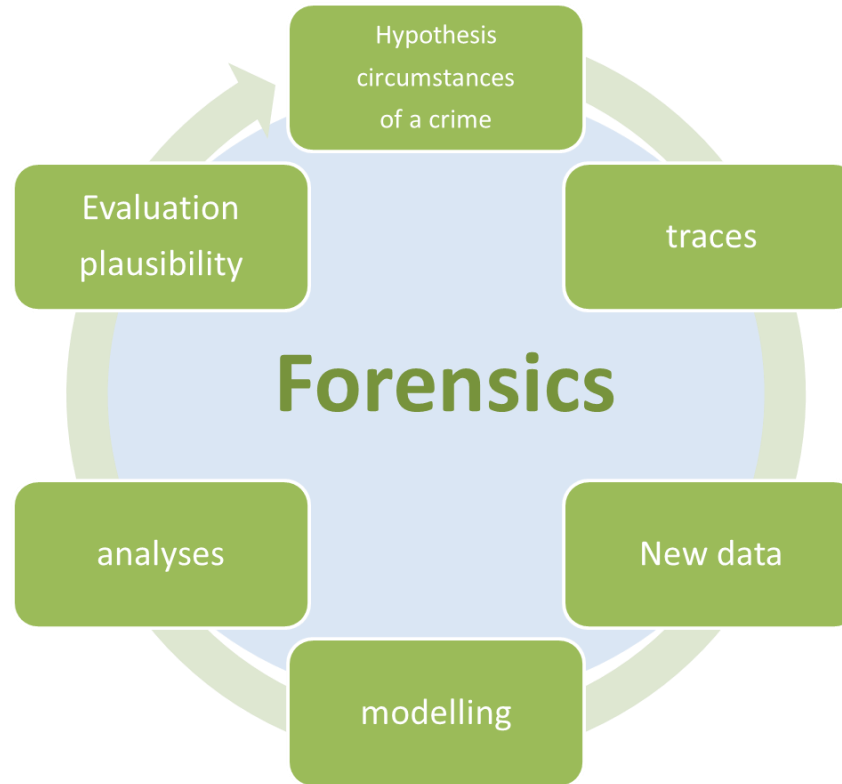


Consideration of digital communication for the modeling and simulation of criminal offences.



Prediction of criminal offences (tendencies), which are planned in virtuality and executed in reality ...

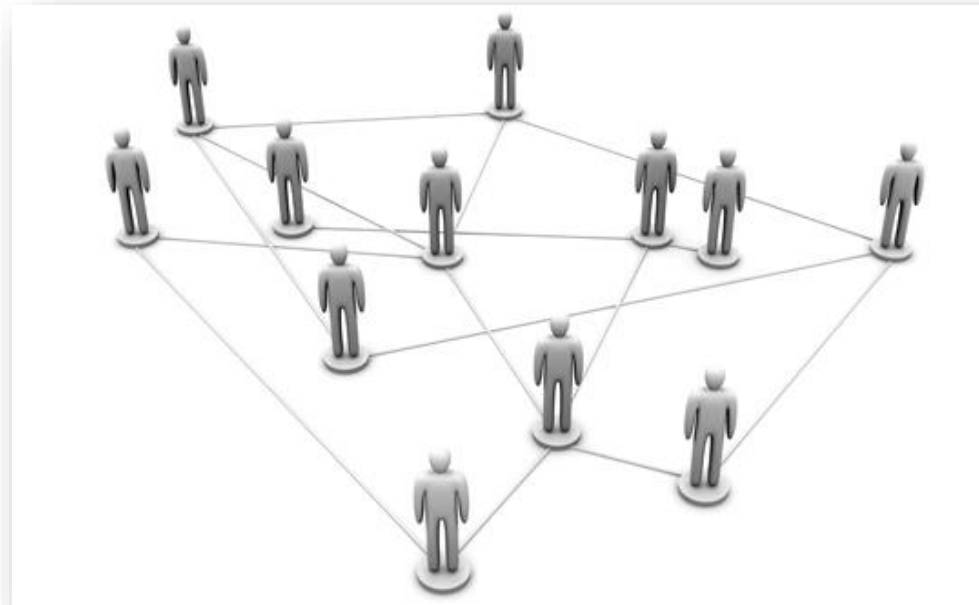
$$P(\text{security}) = 1 - P(\text{crime})$$



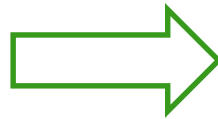
information

Crime scene hypotheses cycle

Human Individual Digital Footprint (HIDF) Network



- Communication
- Information transfer
- Feelings
- Emotions
- Sentiments
- Statements
-



- **Analyses**
- **Validation**
- **Evaluation**

HIDF in groups, sub-groups

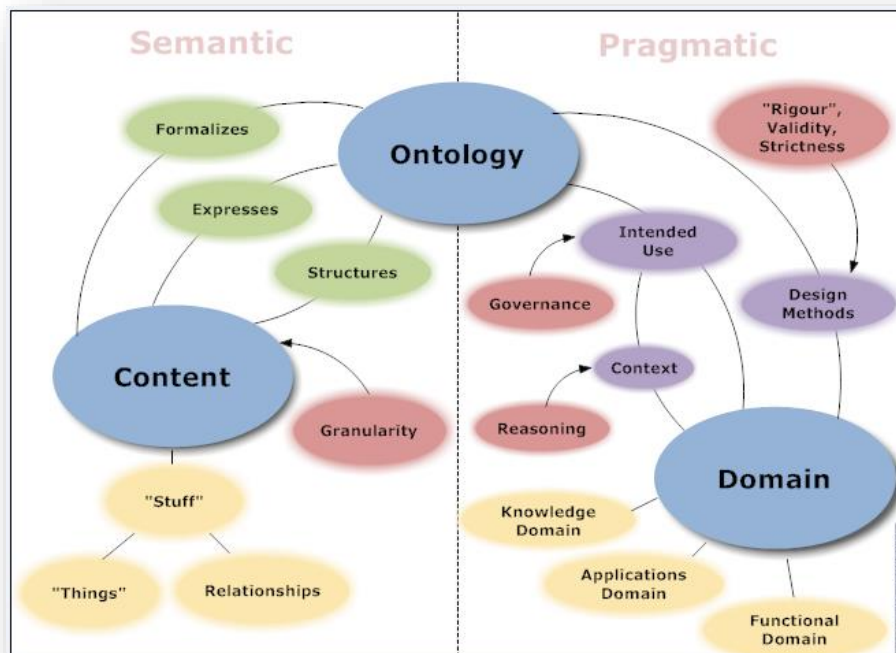


Human Individual Digital Footprint (HIDF) Network

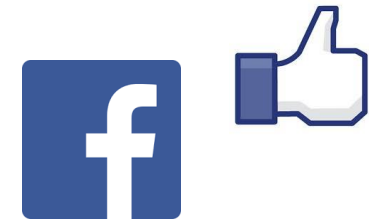
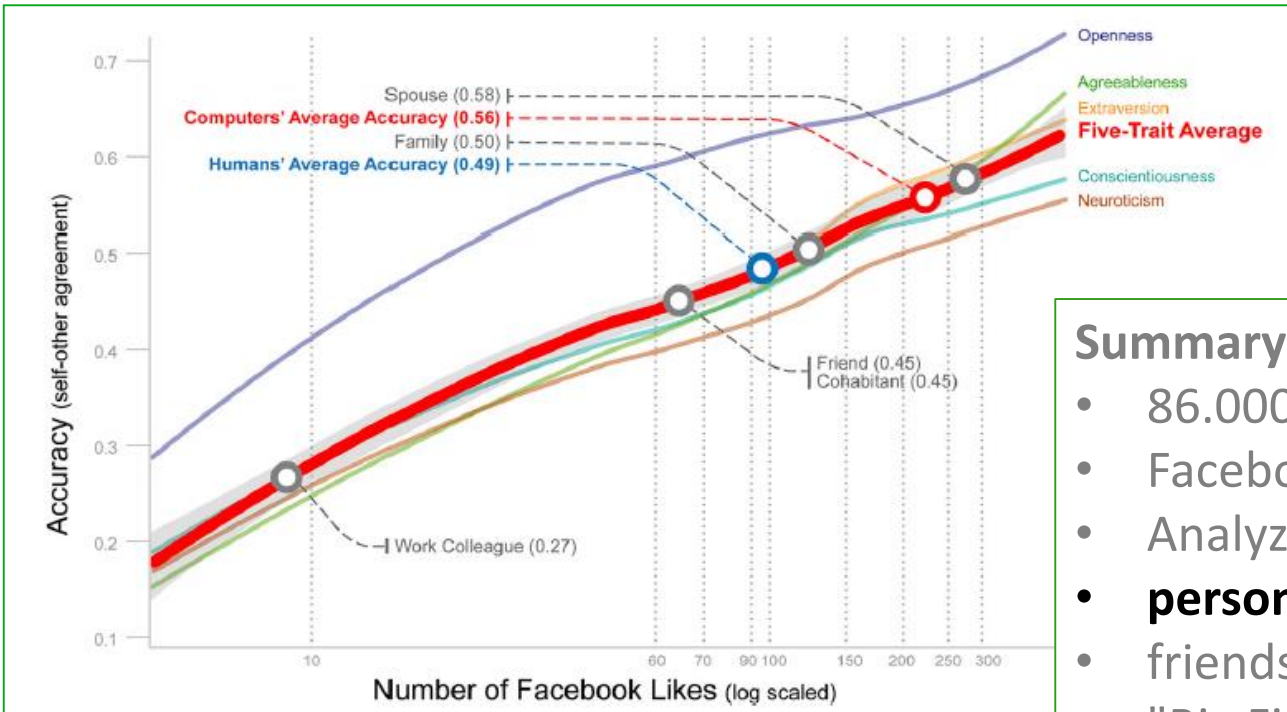


An ontology is a specification of a conceptualization.

Definition of syntax of terms and symbols in a network of associations



Human Individual Digital Footprint (HIDF) Network



- Summary of the Study:**
- 86.000 participants
 - Facebook-Account
 - Analyze the Likes
 - **personality test** 100 questions
 - friends and more
 - "Big Five" model

Computer-based personality judgments are more accurate than those made by humans

Wu Youyou^{a,1,2}, Michal Kosinski^{b,1}, and David Stillwell^a

^aDepartment of Psychology, University of Cambridge, Cambridge CB2 3EB, United Kingdom; and ^bDepartment of Computer Science, Stanford University, Stanford, CA 94305

**Social networks -
Sentiment analyses of groups in social networks
and**

Sentiment Detection:

- sub-area of text mining
- automatic analysis of texts with the aim of identifying an **expressed attitude** as positive or negative

trend analysis

Statistical analysis starts from a basic set of concepts (**or n-grams**), which is associated positive or negative sentiments.

- Occurrences of positive or negative sentiments
- Comparison
- Designation of trends, opinions Statements

Inside the Web --- feelings, beliefs and personal opinions!

Generation of person landscapes from Facebook

PEGIDA – Patriotische Europäer gegen die Islamisierung des Abendlandes
(*Patriotic Europeans Against the Islamisation of the West*)

“Slogan”

- Asylindustrie – alysum industry
- Lügenpresse – lies press
- Volksverräter – public traitor
- Der Untergang des Abendlandes
- „the decline of the West”
- Islamisierung ... Islamic



PEGIDA – Patriotic Europeans gegen die Islamisierung des Abendlandes (*Patriotic Europeans Against the Islamisation of the West*)

A political movement

- far-right, conservative, nationalist
- anti-Islam

- formed in **October 2014**
- present in Saxony region of Germany, many offshoots exist(ed) in other German cities and countries

Causes for the group's sudden uprising and gain in popularity:

- Nationalist anti-EU movements had grown to significant sizes in entire Europe in 2014
 - refugee crisis
 - Acts of Islamist terrorism and violence in Europe
- Increase of Islamophobia

Generation of landscapes from Facebook

PEGIDA
@pegidaevofficial

Home
About
Photos
Likes
Notes
Videos
Posts

Create a Page

DRESDEN ZEIGT WIE'S GEHT!

GROSSER DRESDNER ABENDSPAZIERGANG
MONTAG 26.09.2016 UM 18:30 UHR
WIENER PLATZ - AM HAUPTBAHNHOF

Like Message Save More

PEGIDA shared Siegfried Daebritz's post.
1 hr · 🌐

#PEGIDA #SchautHin

Im Vorfeld des 3. Oktober in Dresden, wird die Stadt Stück für Stück zu Legoland, gegen Schall von Trillerpfeifen helfen diese Klötze trotzdem nicht. 😊

See Translation

Community

Search for posts on this Page

32,516 people like this

Invite friends to like this Page

ABOUT >

PEGIDA - Patriotische Europäer
GEMEINSAM SIND WIR STARK

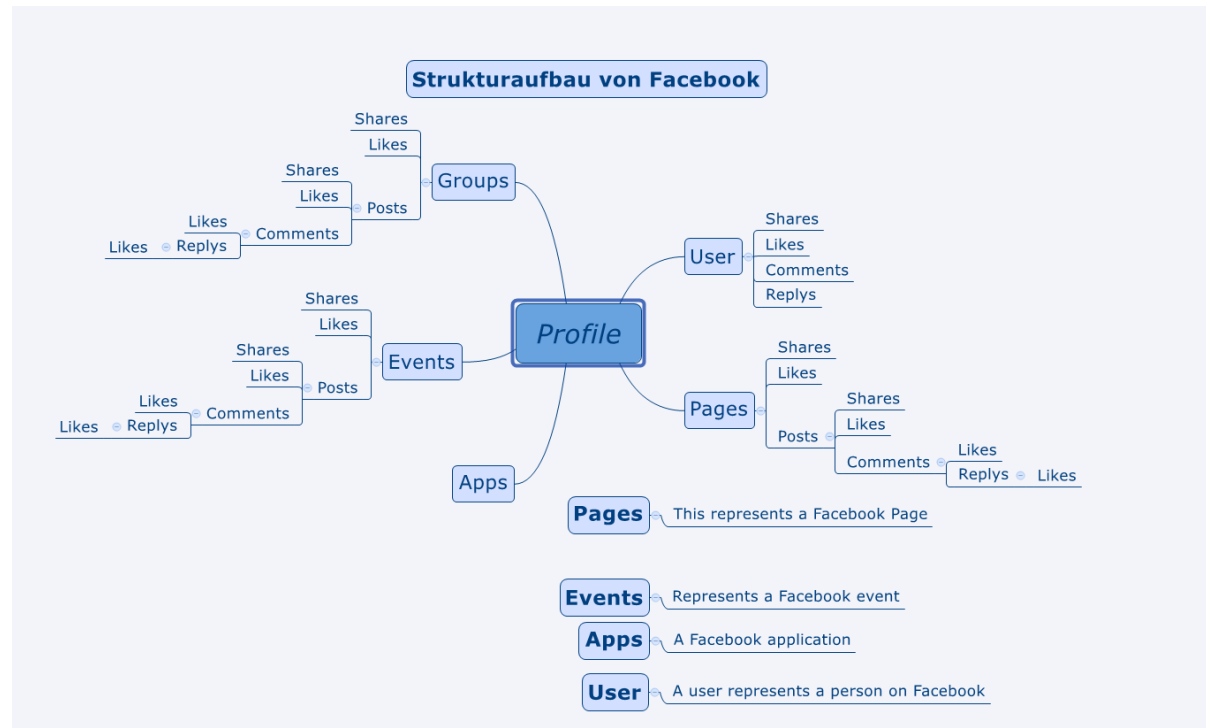
https://www.pegida.de/...

Generation of person landscapes from Facebook

Information exchange via FB

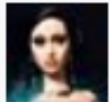


Graph API
application
programming
interface



Generation of landscapes from Facebook

Comments



Marika Heimer Hallo Merkel..tschüss bitte....Sie sind der Gefolgsmann der Industrie und ein Verräter

[See Translation](#)

Like · Reply ·  3 · 3 hrs · Edited

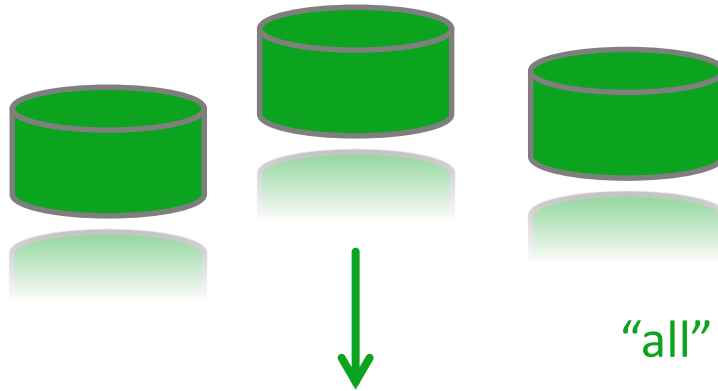


Kerstin Muschke Diese Frau hat jeglichen Bezug zur Realität verloren, ich frage mich, WER oder WAS sie noch stoppen kann ...

[See Translation](#)

Definition of a general **Data Model** – based on the Graph API

Information from FB via API → Data model



“all” relevant Data (Subsets)

Search relations and correlations

and sentence

SoNA - Social Network Analyzer
File Help Repository

PEGIDA

Visualization

Visualize your favourite information

Contact Network

Press T or P to switch between Transforming and Picking mode.

Navigation

f PEGIDA

Visualization Properties

Time Range

From: 10.01.2016 To: 18.01.2016

Only show relevant comments

[Reset relevance](#)

Search Results

Search

Search in:

Users Posts Comments

Outline

Post

ID: 790669100971515_1038725212832568

Caption: epochtimes.de

Message

#PEGIDA #InformiertEuch #InformiertAndere

Ja, vom sogenannten "arabischen Frühling" kennen wir das alle.

In Skandinavien kennt man es schon länger als #Vergewaltigungsjihad.

Das BKA kenne aus einigen arabischen Ländern das Phänomen der gemeinschaftlich begangenen sexuellen Belästigung von Frauen durch junge Männer in der Öffentlichkeit. Dies gehe bis zur Vergewaltigungen. Ein vergleichbares Phänomen sei in Deutschland bislang nicht bekannt.

Comments

"Nach Charlie Hebdo hat man gesagt: Ich bin Charlie(,...)" - Eddie Graf

"Das sind doch alles nur Phrasen ..." - Ute Fugmann

"Polizei ging voll Hass gegen #PEGIDA vor.https://(...)" - www.unzensuriert.at

"Lasst erst mal die Freibadsaison u. den Sommer kom(...)" - Ioane Xevsur

"also müsste dem mit gemeinschaftlich begangenen EI(...)" - Herbert Graf

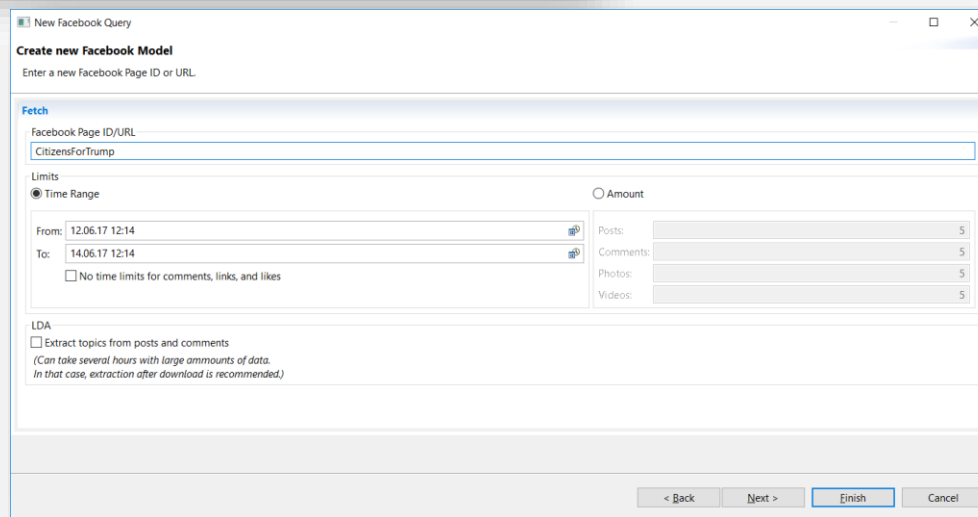
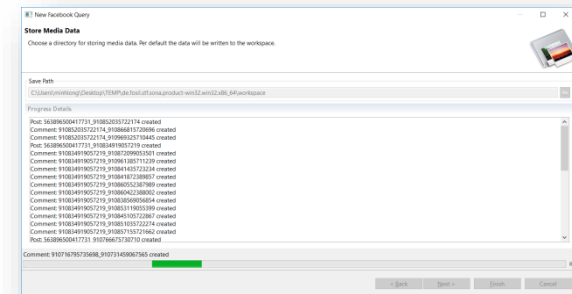
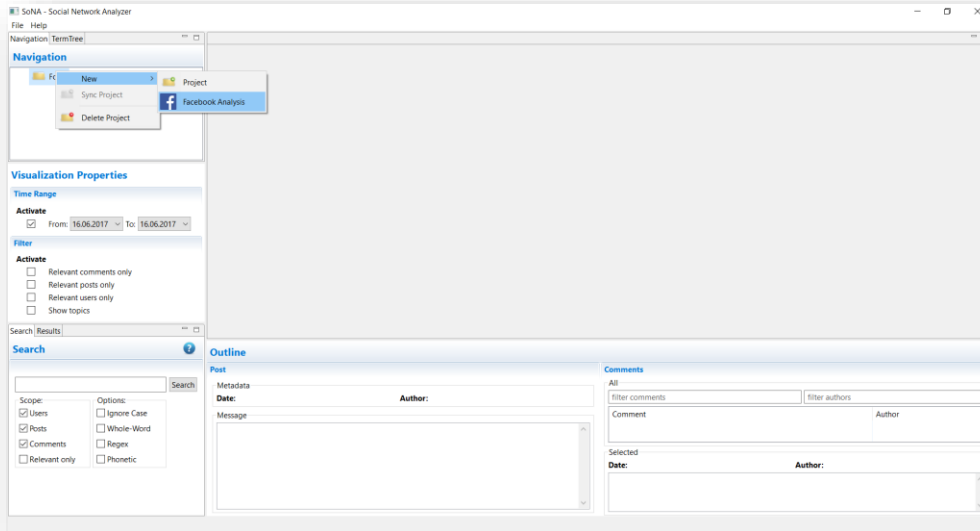
CONFERENCE-PAPER

"Towards Predictive Policing: Knowledge-based Monitoring of Social Networks"

Autoren:
Michael Spranger, Florian Heinke, Steffen Grunert, Dirk Labudde

veröffentlicht:
IMMM2015

Generierung von Wissenslandkarten aus Facebook

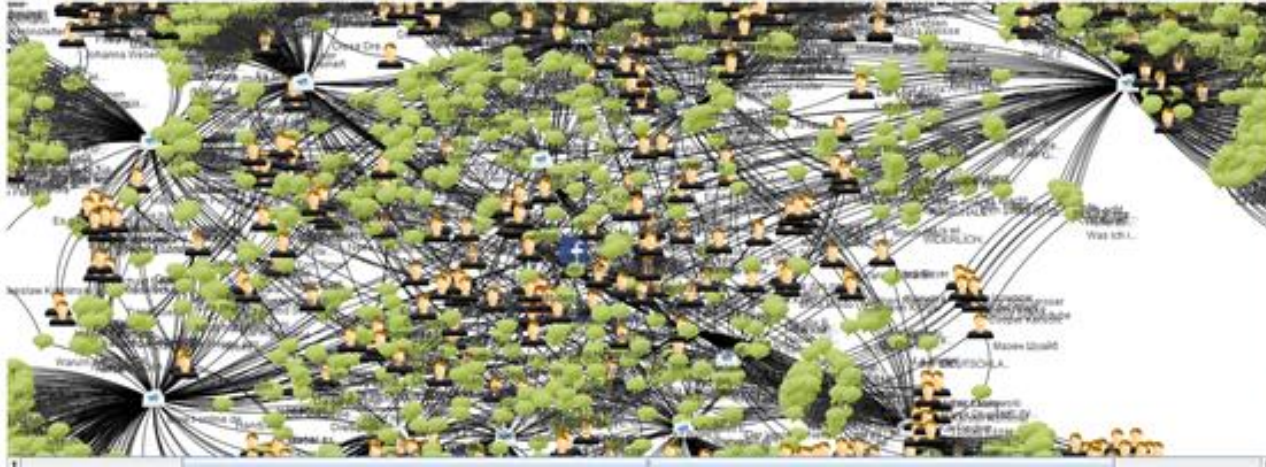




- User activities
- Topics
- Subgroups

- User-specific content
- Sentiments of the network

Participants FB_ID → user profiles



All information are labeled by time and user!

Analyze der opinion in der Group

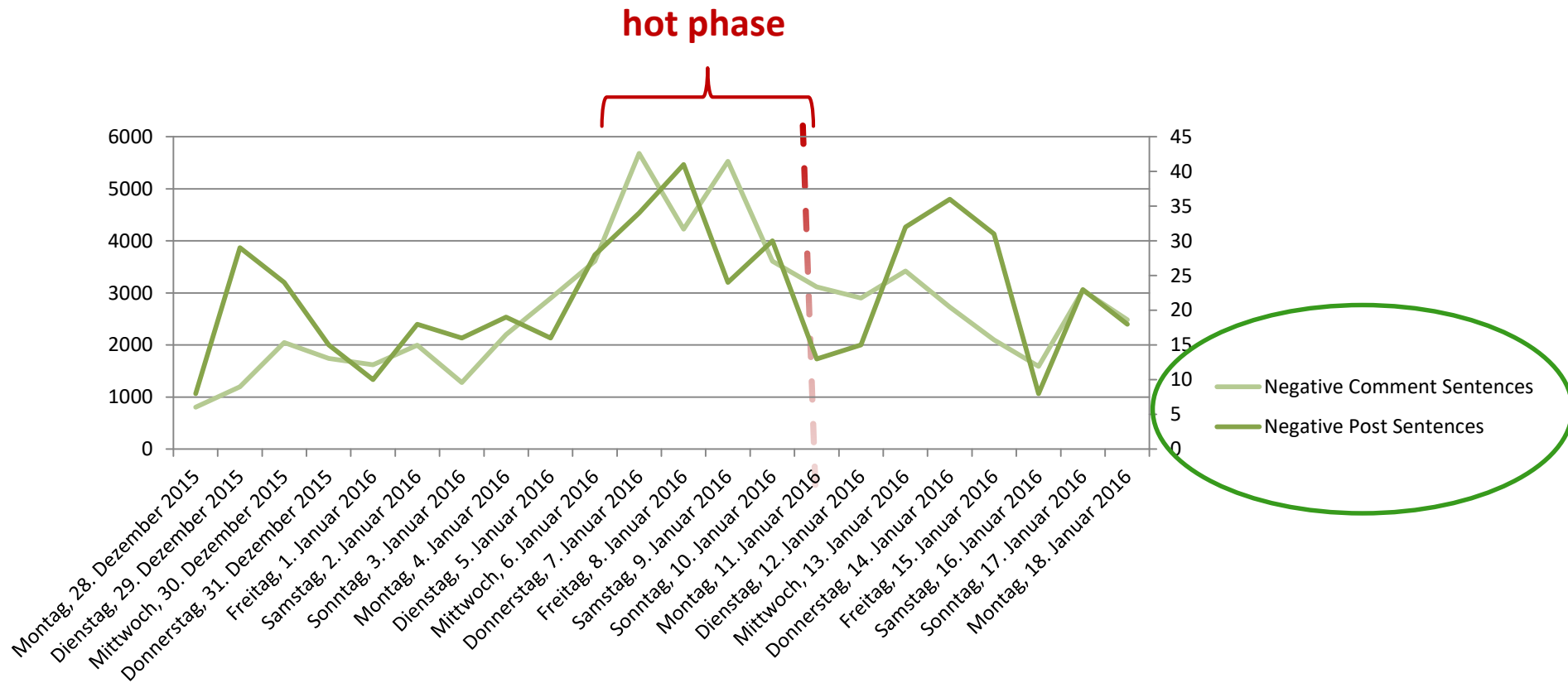
- a. positive
- b. negative
- c. neutral

Sentiment Analyze



Time and geographical
Monitoring

Opinions and moods (Sentences)



Digitized traces - geographical Monitoring

Digital traces



Foto BigData



Video BigData



What makes pictures and videos from the perspective of Forensics so interesting?

- Database forensics
 - Mobile device forensics
 - Forensic video
 - Forensic audio
-
- Manipulation of pictures
 - artificial generation of Pictures
 - class of devices (digital camera, scanner, etc.)

Content

Meta-data

Basic Image Information

Target file: IMG_20151018_142938734.jpg

Camera:	Motorola XT1072
Lens:	3.5 mm (Max aperture f/2) (shot wide open)
Exposure:	Auto exposure, Program AE, 1/38 sec, f/2, ISO 80
Flash:	Off, Did not fire
Date:	October 18, 2015 2:29:39PM (timezone not specified) <small>(14 days, 14 hours, 16 minutes, 6 seconds ago, assuming image timezone of US Pacific)</small>
Location:	Latitude/longitude: 53° 35' 53.7" North, 9° 45' 7.7" East (53.598240, 9.752140)
	Location guessed from coordinates: <i>Feldweg 85 24, 22559 Hamburg, Germany</i>
	Map via embedded coordinates at: Google , Yahoo , WikiMapia , OpenStreetMap , Bing (also see the Google Maps pane below)
	Altitude: 90 meters (295 feet)
File:	3,264 × 1,836 JPEG (6.0 megapixels) 3,543,061 bytes (3.4 megabytes)
Color Encoding:	WARNING: Color space tagged as sRGB, without an embedded color profile. Windows and Mac browsers and apps treat the colors randomly. <small>Images for the web are most widely viewable when in the sRGB color space and with an embedded color profile. See my Introduction to Digital-Image Color Spaces for more information.</small>



camera- und shooting-related data:

- Aperture
- Time
- Place
- Camera type etc.

EXIF Metadata (**TIFF** or **JPEG**)



Geo-location data

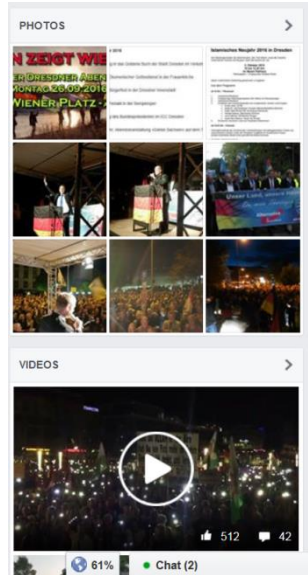
View 2 more comments

Hertha Hofeditz Das ist sonnenklar! Sonst würden die illegalen Glücksritter nicht nur Deutschland, Schweden und Österreich amsteuern. Dann wären die auch nach Tschechien und Polen und Rumänien gegangen. Alles sichere Länder. Das liegt alles klar auf der Hand!
See Translation

Like · Reply · 8 · 1 hr

Dieter Krause Das Sozialsystem wird kollabieren. Muss es, da reicht es nur kurz drüber nachzudenken. Genau deshalb handelt die Merkel verantwortungslos. Es wird dann alle treffen.
See Translation

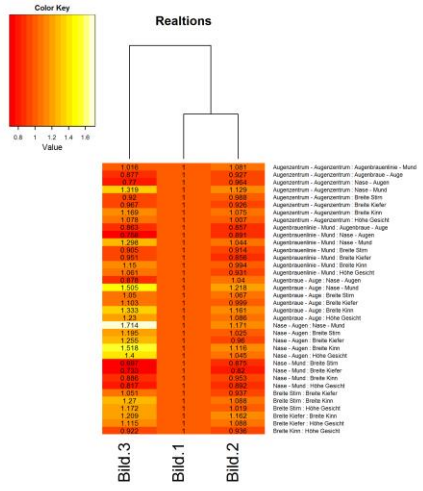
Like · Reply · 3 · 48 mins



comparison to famous persons



similarity score



facial proportions



(a) Gesicht 1



(b) Gesicht 2



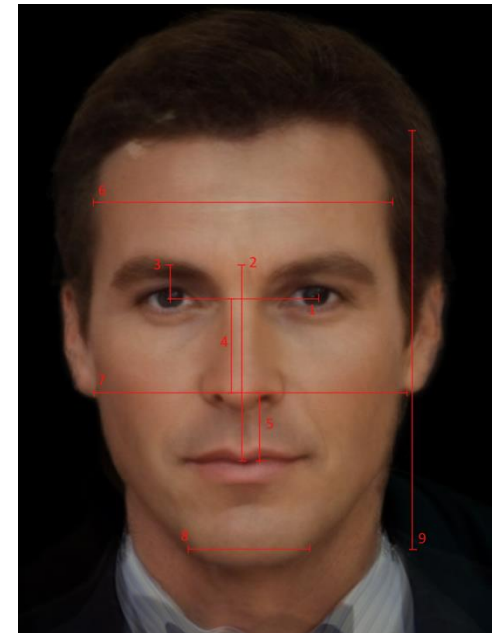
(c) Gesicht 3

$$\mathbb{R}^{m \times n} = \begin{pmatrix} r_{1,1} & r_{1,2} & \cdots & r_{1,n} \\ r_{2,1} & r_{2,2} & \cdots & r_{2,n} \\ \vdots & \vdots & \ddots & \vdots \\ r_{m,1} & r_{m,2} & \cdots & r_{m,n} \end{pmatrix}$$

$$r_{i,j} = \frac{a_{i,j}}{a_{i+1,j}}$$

$$\begin{aligned} d(j, k) = d(k, j) &= \sqrt{(r_{1,j} - r_{1,k})^2 + (r_{2,j} - r_{2,k})^2 + \cdots + (r_{m,j} - r_{m,k})^2} \\ &= \sqrt{\sum_{i=1}^m (r_{i,j} - r_{i,k})^2}. \end{aligned}$$

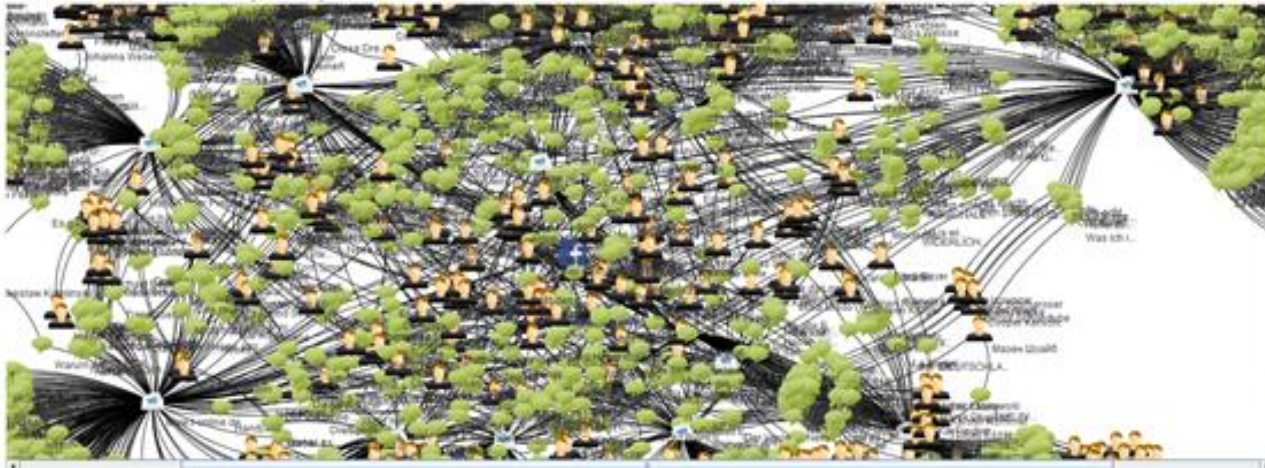
Euclidean distance to the pairwise distances of faces j and k



Content

Meta-data

User-list



All information are labeled by time, locations and user!

Sentiment Analyze

+

Possible geo-information

Digital traces

Digitized traces

Digital traces

Digitized traces

Digital traces

Digitized traces

Digital traces

Digitized traces

Digital traces

Digitized traces



Prediction

BigData – Predictive Policing

Is it possible to identify threat hot-spots ?

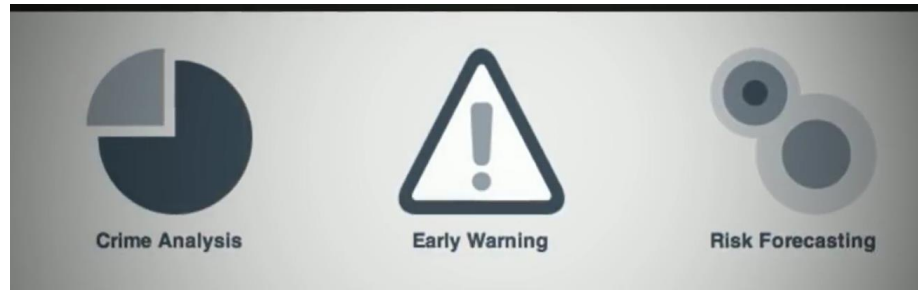


Can we support long-term resource and strategy planning ?



Can we predict the long-term development of groups that pose a threat ?





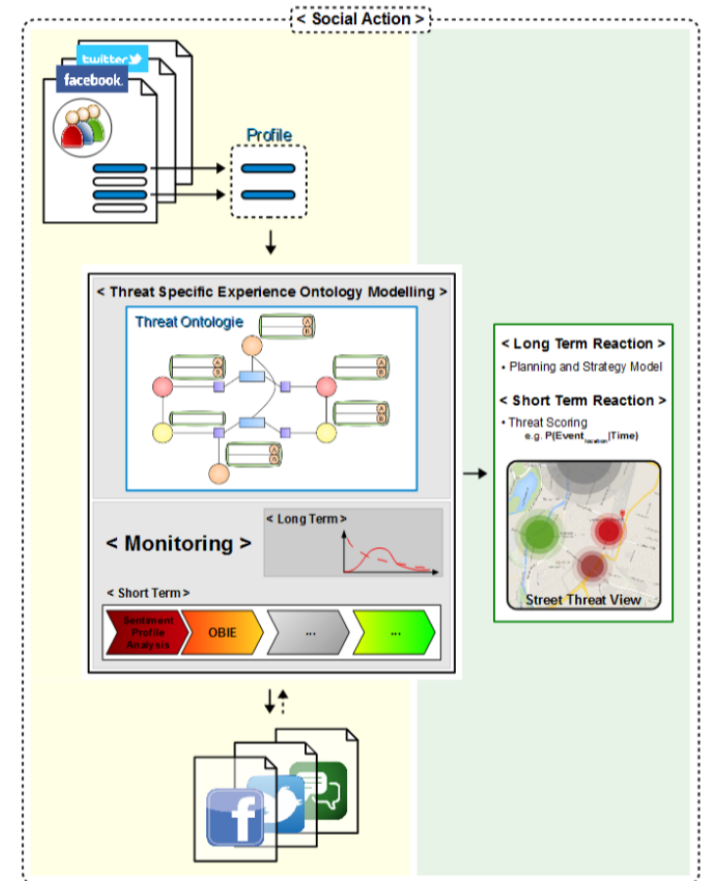
Number of crimes and their "conditions"

Towards Predictive Policing: Knowledge-based Monitoring of Social Networks

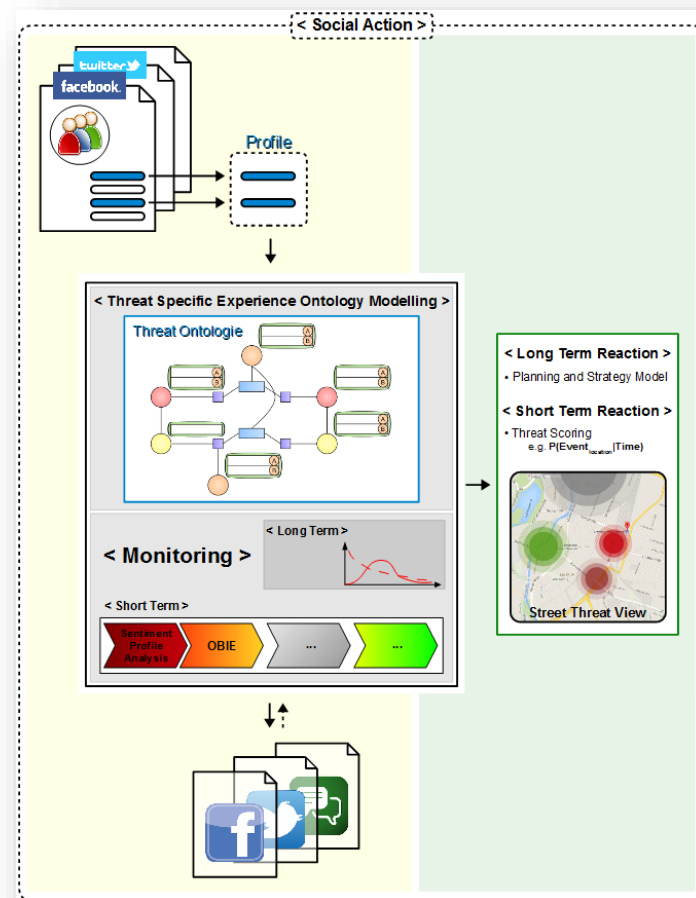
Michael Spranger, Florian Heinke, Steffen Grunert and Dirk Labudde
 University of Applied Sciences Mittweida
 Mittweida, Germany
 Email: {name.surname}@hs-mittweida.de

Abstract—Increasing the resilience of the society against disorders, such as disasters, attacks or threatening groups, is one of the biggest challenges. Recent events highlight the importance of a resilient society and steps which are required to be taken in resilience engineering. *A priori* the optimal way to handle such adverse events is to prevent them, or at least provide appropriate courses of preparation. The essential requirement for every kind of preparation is information about relevant upcoming events. Such information can be gained for example from social networks and can form the basis for a long-term and short-term strategic planning by security forces. For that purpose, an application framework for knowledge-based monitoring of social networks is proposed, which is able to predict short-term activities as well as the long-term development of potentially dangerous groups, and discuss its basic concepts.

Index Terms—forensic; text processing; resilience engineering



- Extraction of profiles for monitoring
- Extraction of post or comment content relating to the threat ontology and a sentiment analysis
 - enables short-term reaction
- Simulation of temporal development of groups and hot-spots
 - enables long-term resource and strategic planning
- Increasing resilience



Opinions and moods (Sentences)

rights rioters in Leipzig-Connewitz

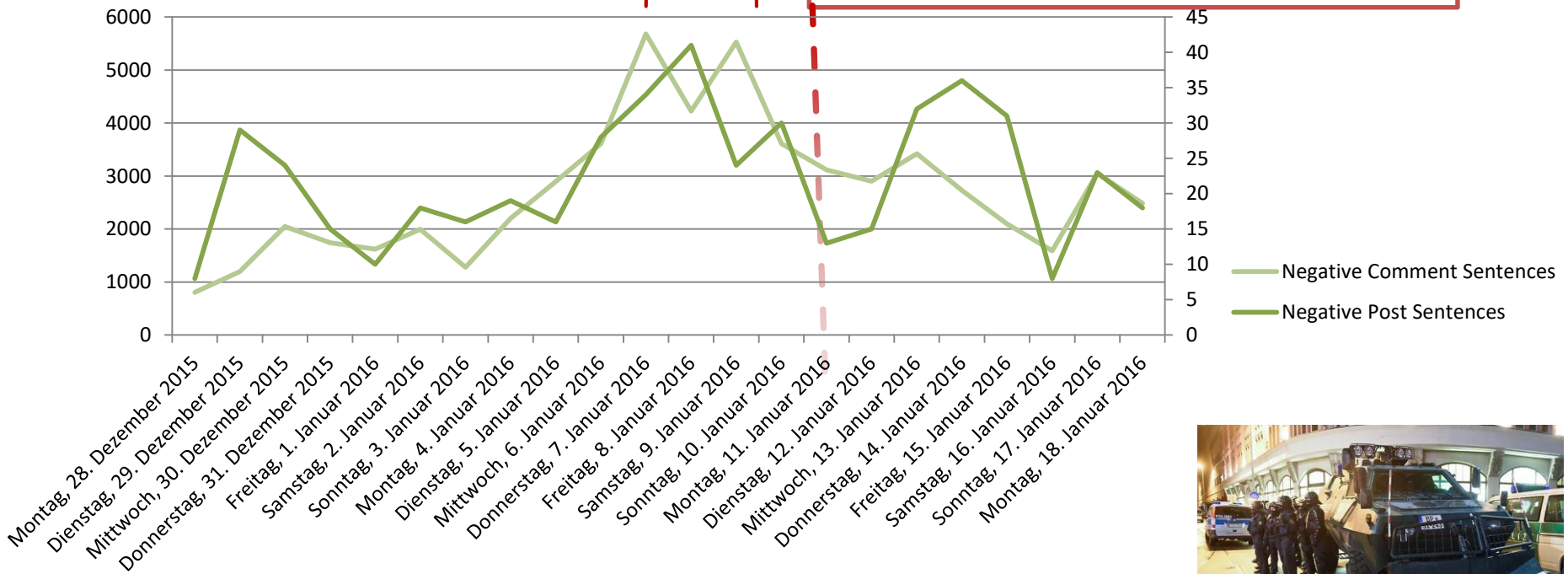


hot phase

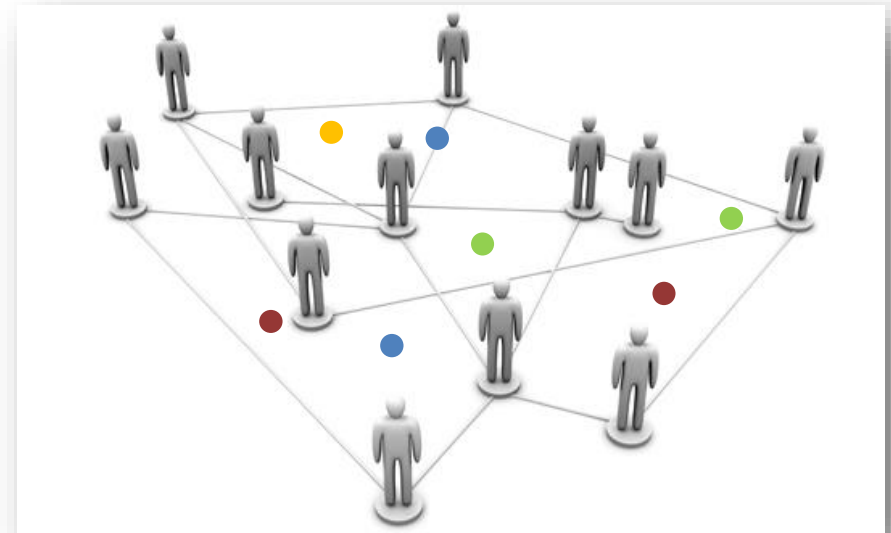
Montag, 11. Januar 2016

Entsetzen in Leipzig Rechte Randalierer verwüsten Connewitz

Während in der Leipziger Innenstadt das fremdenfeindliche Legida-Bündnis demonstriert, nutzen rund 250 Hooligans die Gelegenheit, in Connewitz einzufallen. Sie ziehen eine Schneise der Verwüstung durch das linksalternative Viertel, bevor die Polizei die Lage unter Kontrolle bekommt.



statistical testing units

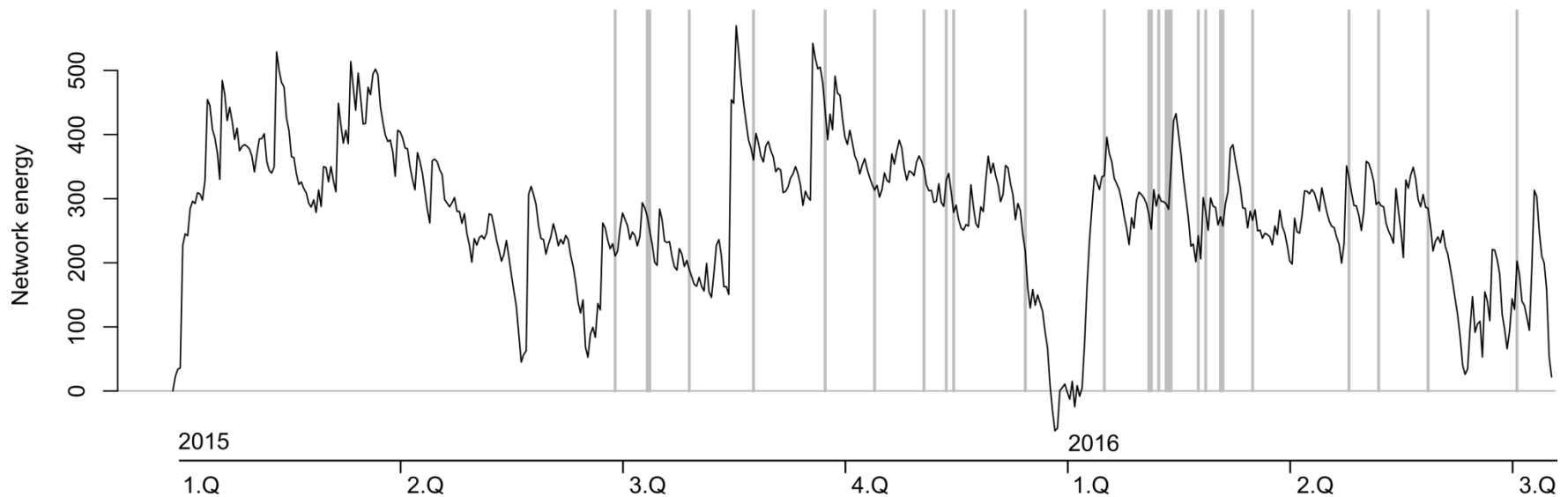


„energy agents“

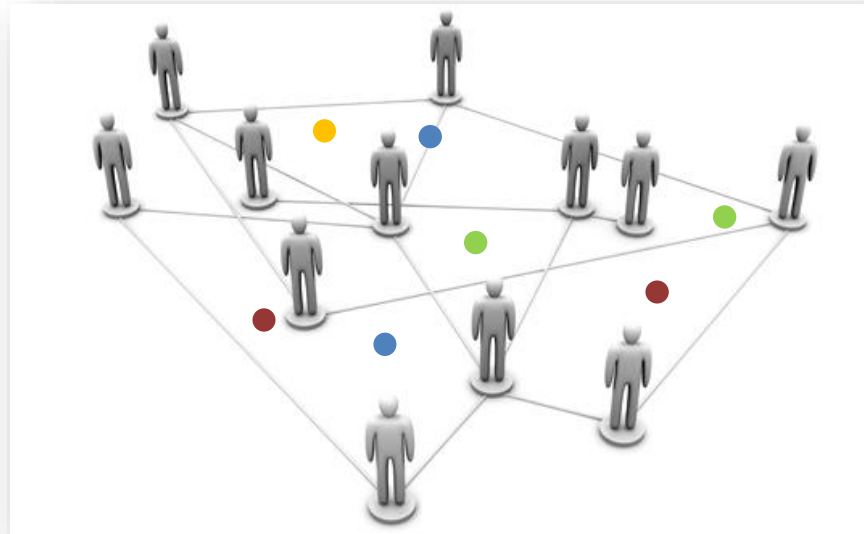
- comprised by a set of independent **statistical testing units**
- the role of each unit is **to test the degree of change between sentiment statistics obtained for two points in time**

Sentiment analyses of user comments made on official PEGIDA's facebook page
→ per day 'temper' tracking

Boltzmann-stochastic Chi-Squared Tester Network



**The networking energy is the sum of all unit energy values
→ Representation of 'network awareness'**

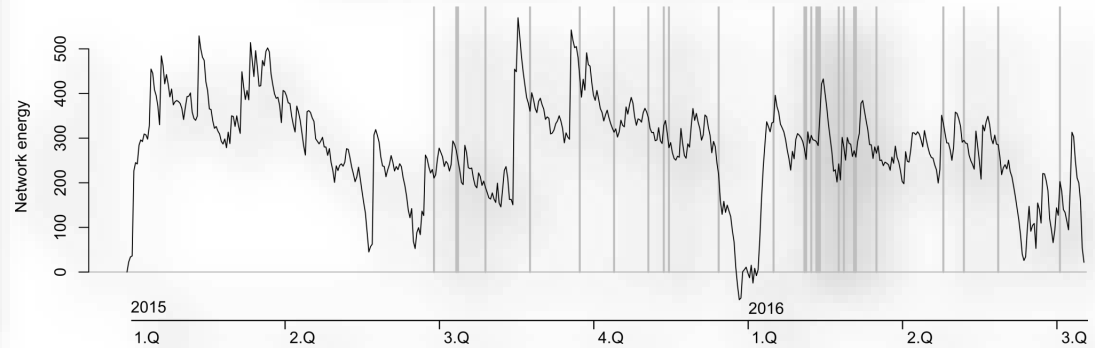


- an energy value is assigned to each unit
- for each observation (sentiment and comment frequencies), it is decided whether a given unit conducts a statistical test **on the new data depending on its energy value**
- **in the test, the new data is compared to the data the unit processed during the last test!**
→ **the network memorizes the data and underlying dynamics!**

Sentiment analyses of user comments made on officials PEGIDA's facebook page
→ per day 'temper' tracking



Boltzmann-stochastic Chi-Squared Tester Network



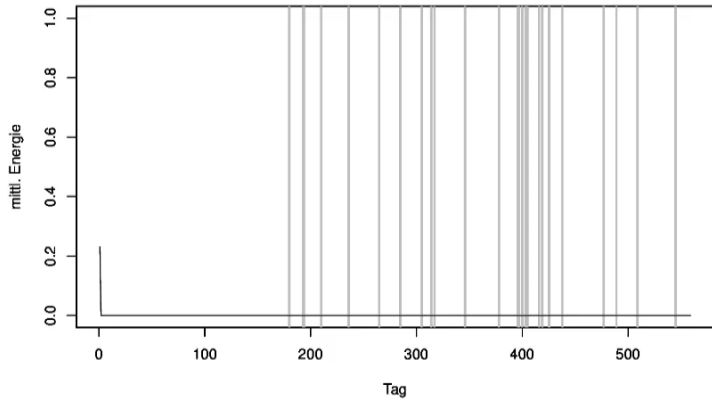
Are energy peaks correlated to major criminal incidents with anti-Islam and anti-refugee background?

**The networking energy is the sum of all unit energy values
→ Representation of 'network awareness'**

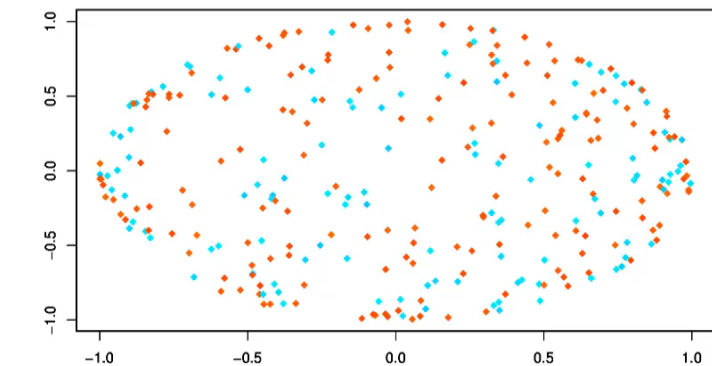
Social networks – Predictive Policing

Sentiment analyses of user comments made on officials PEGIDA's facebook page

→ per day 'temper' tracking



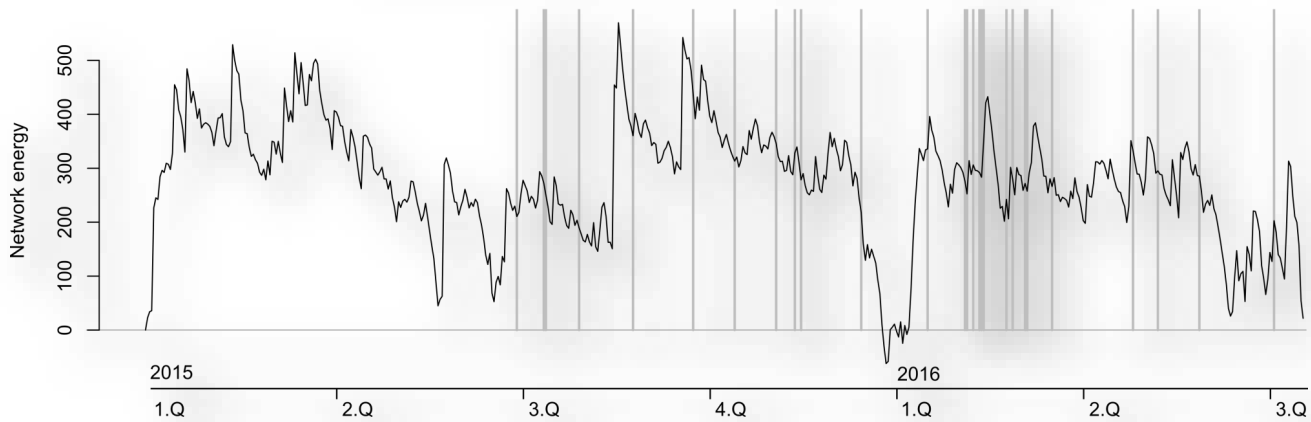
Datum	Bearbeiten	Format	Ansicht	?
27.08.2015	#HTIS 15 SKIPPED	Mitte Jan 16	Altenberg	Rechtsradikaler beleidigt und schlägt zwei Afghanen (21, 26) mit seinem Stahlhelm auf den Kopf + auch als ein Opfer am Boden liegt, vorletz er es weiter + erst als Passanten eingreifen lässt er ab, zeigt den Hiltlergruß und verschwindet http://www.freiepresse.de/nachrichten/sachsen/polizei-fasst-rechtsradikalen-schlaeger-artikel941187.php
10.07.2015	Heßen	Brandanschlag auf geplante Flüchtlingsunterkunft	+ Täter sind in Gebäude eingedrungen und haben eine Wohnung angezündet http://www.spiegel.de/panorama/justiz/melissen-anschlag-auf-asyunterkunft-brandstifter-zu-haft-strafen-versurteilt-a-1088888.html	
11.07.2015	Leipzig (Bohlen)	Zweimalig nächtliche Schüsse auf ein bewohntes Flüchtlingsheim, so dass mehrere Scheiben zu Bruch gingen http://www.lvz.de/Mitteldeutschland/polizeiticker-mitteldeutschland/Asylsuchende-in-angst-schuesse-auf-fluechtlingsheim-in-boehlen		
27.07.2015	Frettal Sprengsatz explodiert	Im Auto von Michael Richter, Vorsitzender der Linken-Fraktion im Städttrat https://www.lpb-bw.de/fremdenfeindlichkeit.html		
22.08.2015	Heidenau	vor Flüchtlingsheim Straßenschlacht zwischen Hunderten Rechtsradikalen und der Polizei + Polizei mit Flaschen, Steinen und Feuerwerkskörpern beworfen + später auch Auseinandersetzungen mit Rechtsradikalen und Gegendemonstranten der Antifa-Szene https://www.lpb-bw.de/fremdenfeindlichkeit.html		
20.09.2015	Frettal Anschlag auf Flüchtlingsunterkunft	mit Pyrotechnik + fast zeitgleich Anschlag auf örtliches Büro der Linkenpartei https://www.lpb-bw.de/fremdenfeindlichkeit.html		
10.10.2015	Crimmitschau	Anschlag mit Stahlkugeln auf Wohnungsgesellschaft Crimmitschau, so dass mehrere Fensterscheiben zu Bruch gingen + Firmenschild und Eingangstür des Büros mit rechten Parolen wie 'volksvertreter' oder 'wir kriegen euch alle' beschleiert http://bitlinkpunkt-crimmitschau.de/anschlag-auf-crimmitschauer-wohnungsgesellschaft-zusammenhang-zur-fluechtlingsunterbringung-liegt-nahe/ + http://www.freiepresse.de/LOKALES/Zwickau/WERDAU/Anschlaege-mit-Stahlkugeln-Bleiben-unaufgelaert-artikel9598091.php		
30.10.2015	Dippoldswalde und Dresden	Brände in zukünftigen Flüchtlingsunterkünften https://mopo24.de/nachrichten/ossaebau-de-brandanschlag-aufgeklart-fluechtlingsunterkunft-hotel-visa-festnahmen-brandstiftung-7474		
08.11.2015	Leipzig (Beucha)	Unbekanntes geplante Flüchtlingsunterkunft in Brand zu setzen + Täter zerstörten die Eingangstür und Fenster und warfen einen Brandzettel in das Gebäude https://rd1.de/betrag/anschlag-auf-geplante-fluechtlingsunterkunft-bei-leipzig		
11.11.2015	Crimmitschau	Brandanschlag auf Wohnhaus, in dem Flüchtlinge untergebracht wurden + Täter warfen Brandzettel gegen die Wand des Hauses und Blumenkübel auf ein Fenster http://www.freiepresse.de/LOKALES/Zwickau/WERDAU/Brandanschlag-auf-Fluechtlingsunterkunft-in-Crimmitschau-artikel9354513.php		
10.12.2015	Cheimitz (Clausdorf)	circa 30 Leute attackieren einen Bus mit Flüchtlingen mit Steinen und Feuerwerkskörpern http://www.welt.de/politik/deutschland/artikel149878831/Fluechtlinge-wollten-nur-wieder-weg-aus-Jahrsdorf.html		
11.01.2016	Leipzig-Cheimitz	Randale durch circa 250 Rechtsextreme in Leipzig-Cheimitz, welches für seine linksalternative Szene bekannt ist + die Scheiben dutzender Geschäfte wurden zerschmettert + zeitgleich demonstrierte Legida in der Innenstadt http://www.welt.de/politik/deutschland/artikel150933467/kiniges-gewohnt-aber-so-etwas-gab-es-noch-nie.html		
29.01.2016	Cheimitz, Orlma, Leipzig (Zka)	vier Flüchtlingshaine angegriffen durch werfen von Steinen auf das Gebäude + in den Leipzig Fällen sollte auch ein Sprengsatz gezündet werden + Ermittler gehen von Fremdenfeindlichem Hintergrund aus http://www.netz-gegen-nazis.de/artikel/chronik-rechts-extremismus-antisemitischer-gewalt-in-februar-2016-10853/ + http://www.tagesspiegel.de/politik/sachsen-vier-asyllhaine-angegriffen-polizei-pooroestimmung-13908372.html		
30.01.2016	Gelsnitz	vor einer Flüchtlingsunterkunft mehrere Molotowcocktails zusammengeschoßen und in Brand gesetzt http://www.netz-gegen-nazis.de/artikel/chronik-rechts-extremismus-antisemitischer-gewalt-in-februar-2016-10853/		
02.02.2016	Frettal	unbekannte Täter beschmiereten Fassade und Eingangstür eines Linken-Parteibüros mit schwarzer Farbe + auf Eingangstür stand „NS“ und ein Lifafäße in der Nähe waren rechte Symbole und anti-Asyl-Sprüche http://www.dnn.de/Mitteldeutschland/Polizeiticker-Mitteldeutschland/Linken-Partei-buero-in-Frettal-mit-schwarzer-Farbe-beschmieret		
02.02.2016	Zschopau	Mann prahlt vor zwei Mädchen (11 und 12) mit Pistole, Klappmesser, Feuerzundergrün und Feuerzeug + anschließend zeigt der Mann einen Hiltlergruß und droht mit Anschlag auf ein Flüchtlingsheim http://www.netz-gegen-nazis.de/artikel/chronik-rechts-extremismus-antisemitischer-gewalt-in-februar-2016-10853/ + https://mopo24.de/nachrichten/mehrere-gewalttaten-erzgebirge-sachsen-aue-zschopau-annaber-buchholz-43225		
05.02.2016	Orlma	Neonazi hat linksalternativen Jugendlichen Lebensgefährlich verletzt + Täter hat das Opfer mit einer Messer/Schraubenzieher versucht zu erstechen - er verfehlte knapp das Herz, durchstach aber die Lunge und das Opfer lag zwischenzeitlich im Koma + vorher gab es wohl Streit zwischen einer rechtsradikalen und einer linksalternativen Gruppe https://rd1.de/betrag/sachsen-neonazi-nach-mord-versuch-verhaftet		
06.02.2016	Bautzen	unbekannte Täter attackieren einen Flüchtling (32) mit Pfefferspray http://www.netz-gegen-nazis.de/artikel/chronik-rechts-extremismus-antisemitischer-gewalt-in-februar-2016-10853/		
07.02.2016	Heidenau	„MTEINANDER“-Mähmal gegen Ausländerfeindlichkeit vermutlich von Neonazis übernat + 15 Meter langer Schriftzug komplett in rot-schwarz-weiß übermalt (Nationalfarben von Nazi-Deutschland) http://www.rp-online.de/panorama/deutschland/heidenau-mit-feindlicher-mahmal-wohl-von-neonazis-uebermalt-aid-1.5749733		
18.02.2016	Clausnitz	mehr als 100 Menschen blockieren für mehrere Stunden die Anfahrt eines Busses mit Flüchtlingen und beschimpfen die Insassen + „wir sind das Volk“-Rufe https://www.lpb-bw.de/fremdenfeindlichkeit.html		
18.02.2016	Limbach-Oberfrohna	11-jähriger syrischer Junge von zwei Männern verprügelt und getreten https://mopo24.de/nachrichten/junge-verpruegelt-unbekannte-maennern-limbach-oberfrohna-49892		
18.02.2016	Lobau	Brandanschlag auf bewohntes Flüchtlingsheim + zwei Täter, die der rechten Szene zugeordnet werden, warfen Molotowcocktails gegen die Eingangstür und gegen Fenster der Unterkunft http://www.sz-online.de/nachrichten/brandanschlag-auf-loebauer-fluechtlingsheim-3327766.html		
21.02.2016	Bautzen	schwerer Brand in noch unbewohntem Flüchtlingsheim + in Nebenstraße rechte Parolen geufen und schaulustige jubeln https://www.lpb-bw.de/fremdenfeindlichkeit.html + http://www.welt.de/politik/deutschland/artikel152465749/schaulustige-jubeln-in-brand-in-asyheim-in-bautzen.html + http://www.tagesspiegel.de/politik/brandstiftung-in-bautzen-geplante-asyunterkunft-brannt-schaulustige-jubeln-12903480.html		
27.02.2016	Cheimitz	circa zehn verumtete Menschen zogen mit bengalos und Feuerwerkskörpern vor ein bewohntes Flüchtlingsheim http://www.welt.de/politik/deutschland/artikel152746225/bengalos-und-boeller-gegen-fluechtlinge-in-cheimitz.html		
28.02.2016	Cheimitz	drei verfehlte Hammer attackieren taxi-fahrer mit ausländischen wurzeln + als er flüchten will versucht ein kostümierter den ihn zu treten + alle drei Täter riefen rechte Parolen und zeigten den Hiltlergruß http://www.netz-gegen-nazis.de/artikel/chronik-rechts-extremismus-antisemitischer-und-antisemitischer-gewalt-		



Possible events

The networking energy is the sum of all unit energy values
→ Representation of 'network awareness'

Boltzmann-stochastic Chi-Squared Tester Network



Are energy peaks correlated to major criminal incidents with anti-Islam and anti-refugee background?

Answer next time

CONFERENCE-PAPER

"Semantic Tools for Forensics: Approaches in Forensic Text Analysis"

Autoren:

Michael Spranger, Dirk Labudde

veröffentlicht:

IMMM 2013, The Third International Conference on Advances in Information Mining and Management;
ISBN: 978-1-61208-311-7

CONFERENCE-PAPER

"Establishing a Question Answering System for Forensic Texts"

Autoren:

Michael Spranger, Dirk Labudde

veröffentlicht:

3rd International Conference on Integrated Information, IC-ININFO ISSN: 1877-0428

PAPER

"Semantic Tools for Forensics: A Highly Adaptable Framework"

Autoren:

Michael Spranger, Stefan Schildbach, Florian Heinke, Steffen Grunert, Dirk Labudde

veröffentlicht:

ThinkMind ISBN: 978-1-61208-227-1

CONFERENCE-PAPER

"Semantic Tools for Forensics: Towards Finding Evidence in Short Messages"

Autoren:

Spranger Michael, Dirk Labudde

veröffentlicht:

The Fourth International Conference on Advances in Information Mining and Management :: IMMM2014

PAPER

"Towards Establishing an Expert System for Forensic Text Analysis"

Autoren:

Spranger Michael, Dirk Labudde

veröffentlicht:

International Journal On Advances in Intelligent Systems, v 7 n 1&2 2014

CONFERENCE-PAPER

"Towards Predictive Policing: Knowledge-based Monitoring of Social Networks"

Autoren:

Michael Spranger, Florian Heinke, Steffen Grunert, Dirk Labudde

veröffentlicht:

IMMM2015

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