

Inhaltsbasierte Erschließung und Suche in multimedialen Objekten

mediaglobe
the digital **archive**



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Universität Potsdam

HPI

Hasso Plattner Institut



IT Systems Engineering | Universität Potsdam

- Das HPI wurde im Oktober 1998 im Rahmen eines Public-Private-Partnership gegründet
- Forschung und Lehre am HPI ist dem „*IT Systems Engineering*“ gewidmet
- 10 Professoren und ca. 100 Mitarbeiter in Forschung und Lehre
- aktuell 450 Studenten in universitären Studiengängen „*IT Systems Engineering*“
- CHE-Ranking 2010 sieht HPI auf Top-Rang



Semantic Technologies & Multimedia Retrieval

■ Research Topics

- Semantic Web Technologies
- Ontological Engineering
- Information Retrieval
- Multimedia Analysis & Retrieval
- Social Networking
- Data/Information Visualization

■ Research Projects



mediaglobe

the digital archive

<http://projekt-mediaglobe.de/>

mediaglobe

the digital archive



<http://projekt-mediaglobe.de/>

- **THESEUS** Forschungsprogramm:
Neue internetbasierte Wissensinfrastruktur.
 - **UseCase Contentus:** Technologien für die Mediathek der Zukunft.
 - **Projekt Mediaglobe:**
Effizientes Arbeiten mit Mediadaten in Medienarchiven und Rundfunkanstalten.



- effiziente Suche nach/in AV-Inhalten in Medienarchiven und Rundfunkanstalten
- Arbeitsprozesslösung für die effiziente Erfassung, Aufbereitung und Verwertung von AV-Inhalten



Requirement Analysis and Media Census

Data Collection from >200 AV-Archives about digitization, online distribution, and rights management



Efficient Digitization of AV-Archives

Workflow definition, evaluation, and best practices



Software Enabled Digital Rights Management

Workflow definition, best practices for unique determination of copyrights



Automated AV Media Analysis

Extraction of textual and semantic metadata for semantic search



Metadata Engineering

Definition, interlinking, and validation of (semantic) metadata model for media archives



Semantic Search

Combining semantic metadata into semantic search index to enable high precision/recall retrieval



User Interface Design

Support of innovative search strategies with semantic data/information visualization



yovisto
Academic video search

<http://www.yovisto.com/>



■ Semantische Verknüpfungen der Daten

■ Ontologie:

<http://www.yovisto.com/ontology/0.9/>

■ DBpedia, FOAF, DublinCore, MPEG-7, Tagging-Ontology

■ RDFa Annotation

■ SPARQL Endpoint:

<http://sparql.yovisto.com/>

■ Explorative Suche



<http://www.yovisto.com/>



J. Waitelonis, H. Sack: Augmenting Video Search with Linked Open Data, in Proc. of International Conference on Semantic Systems 2009 (i-semantic 2009), September, 2-4, 2009, Graz, Journal of Universal Computer Science

Export aller Daten als RDF

interoperabel, öffentlich

Wie findet man etwas
in einem Videoarchiv?

Wie findet Google etwas in einem Video?

Web Images Videos Maps News Shopping Mail more ▼ Lysander07@googlemail.com | V

Google videos [Advanced Search](#)

Web > Videos Hide options Results 1 - 10 of about 12,300 for multimedia [definition]. (0.23 seconds)

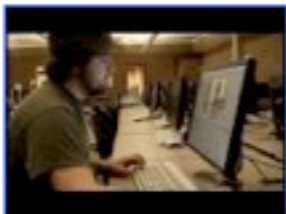

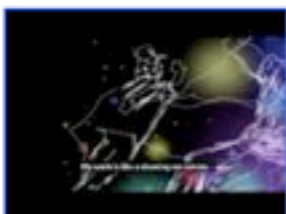

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[Long \(20+ min.\)](#)

› **Any time**
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[Past 24 hours](#)
[Past week](#)
[Past year](#)
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[Sorted by date](#)

› **Any quality**
[High quality](#)

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	NASA - Space Shuttle Multimedia ☆ 25 Nov 2009 NASA.gov brings you images, videos and interactive features from the unique perspective of America's space agency. Get the latest ... nasa.gov - Related videos
	Takagi Masakatsu: Multimedia Artist ☆ 3 min 25 sec - 12 Apr 2007 An artist trying to make sense of the world, delicately molding the everyday into the sublime. Lifting piano lines, digitally-enhanced melodies ... youtube.com - Related videos
	Dreamweaver: Multimedia ☆ 8 min - 2 Sep 2006 Becoming a power user with Dreamweaver includes understanding and mastering it to include multimedia functions. google.com - Related videos

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*Wie findet man etwas
in einem audiovisuellen Archiv?*

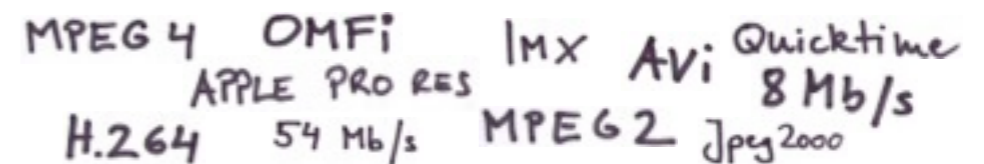


Wie findet man etwas in einem audiovisuellen Archiv?



1. Schritt: Digitalisierung analoger AV-Medien

Damit audiovisuelle Daten einer computer-gestützten gezielten Suche zugänglich werden, müssen sie zuerst digitalisiert werden.



Wie findet man etwas in einem audiovisuellen Archiv?



1. Schritt: Digitalisierung analoger AV-Medien

Damit audiovisuelle Daten einer computer-gestützten gezielten Suche zugänglich werden, müssen sie zuerst digitalisiert werden.



2. Schritt: Verschlagwortung

Damit audiovisuelle Daten einer computergestützten gezielten Suche zugänglich werden, müssen Beschreibungen, Schlüsselwörter, etc. üblicherweise Textform vorliegen.

Wie findet man etwas in einem audiovisuellen Archiv?

- Zur gezielten Suche in audiovisuellen Medien benötigen wir **textuelle Beschreibungen**
 - des Inhalts
 - des Produktionsprozesses
 - der technischen Parameter
 - etc....
- Metadaten für AV-Inhalte werden Heute meist immer noch **manuell** erstellt



➔ *Manuelle Audio-/Videoanalyse*

metadata
describe
information
Data

...geht das auch
automatisch?

Automatisierte Audio- und Videoanalyse

automatische inhaltliche Analyse ist

- schwierig (fehleranfällig) und
- berechnungs-/speicheraufwändig



Overlay-text

Genre-Analyse

Face-Detection

Logo-Detection



Audio-Mining

Strukturelle Analyse

Transkription

Sprecher-identifikation

Szenen-text

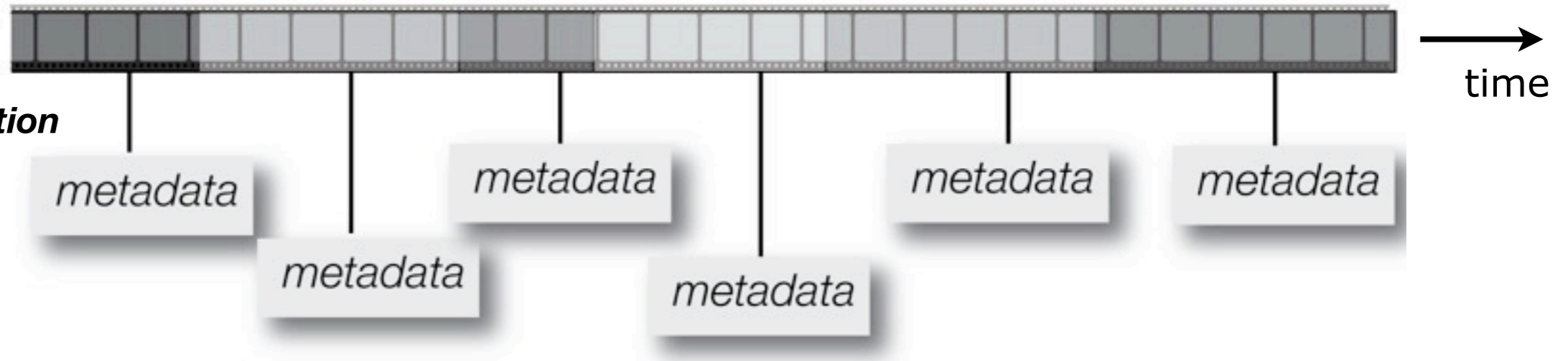


Automatisierte Audio- und Videoanalyse



- Ergebnis: Videosegmente mit zugeordneten, zeitbezogenen Metadaten

Metadata Extraction



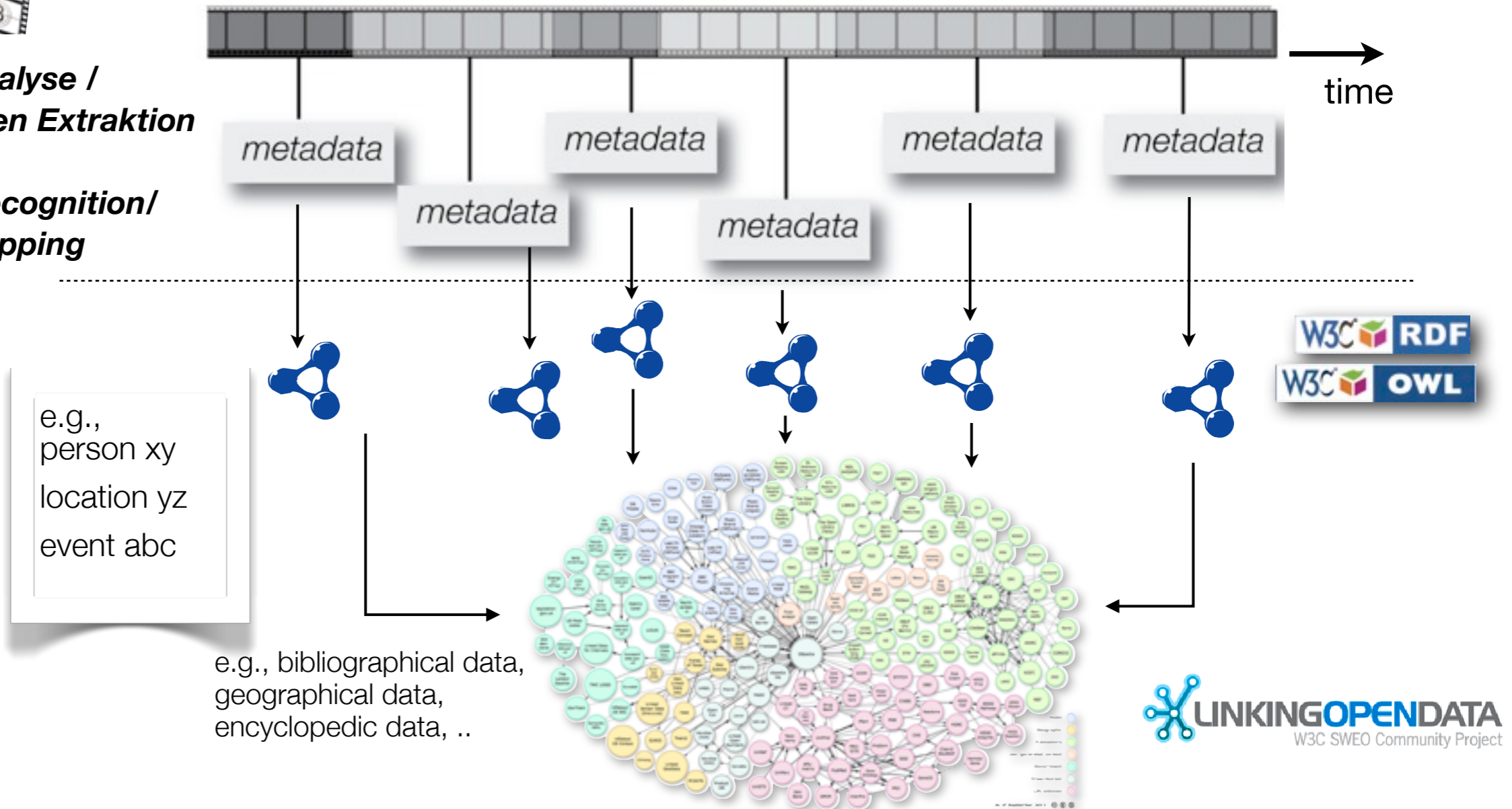
- **Metadaten** setzen sich zusammen aus kombinierten Low Level / High Level Deskriptoren
- **Metadaten** als Basis für traditionelles und semantisches Information Retrieval

Semantische Analyse



**Video Analyse /
Metadaten Extraktion**

**Entity Recognition/
Mapping**



Automatische
Videoanalyseverfahren



Automatisierte Audio-/Videoanalyse

- **Strukturelle Analyse**
- **Intelligent Character Recognition (ICR)**
 - Character/Logo Detection
 - Character Filtering
 - Character Recognition
- *Audio Analyse*
 - *Speaker Detection*
 - *Automated Speech Recognition (ASR)*
- *Genre Analyse*
- *Face/Body Detection & Clustering*

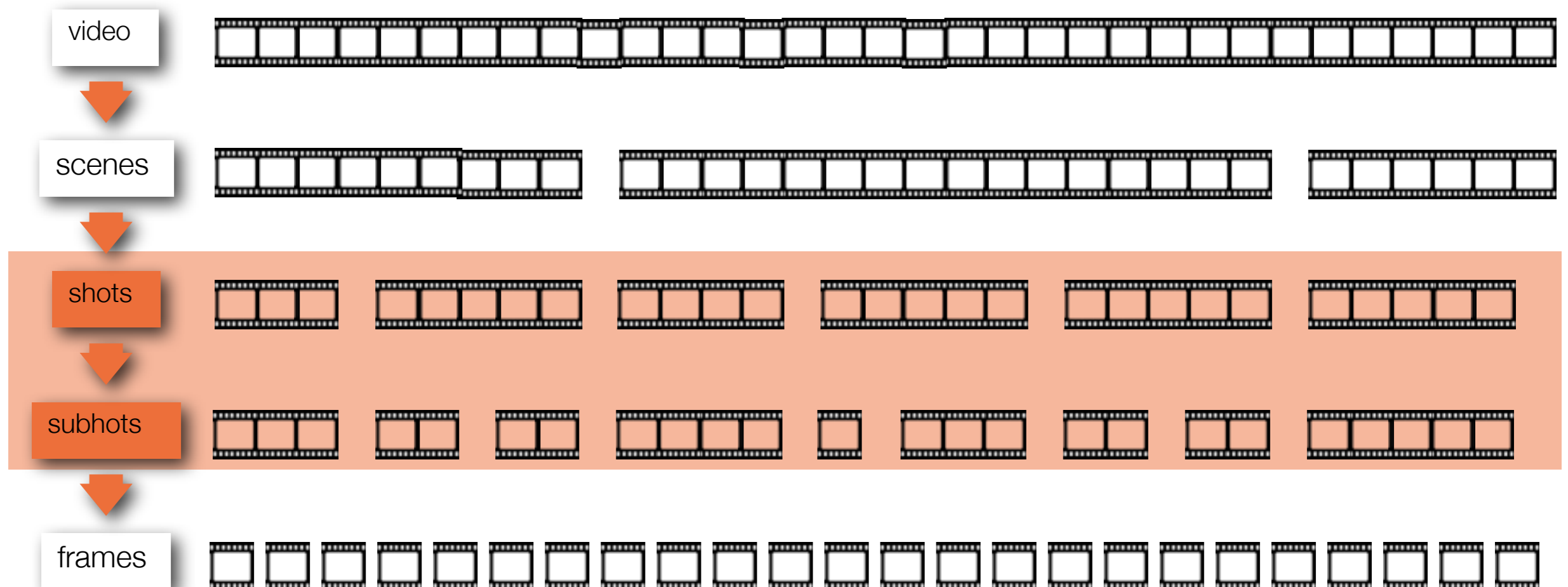
Semantische Analyse

Semantische Suche

Strukturelle Analyse

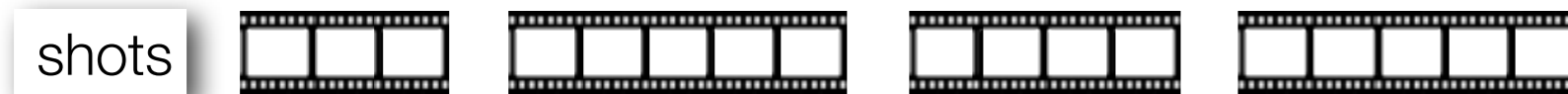


- Automatische strukturelle Gliederung von AV-Daten
- Zerlegung des Videodatenstroms in inhaltlich kohärente Abschnitte (Segmente)



Strukturelle Analyse

- *Shot Boundary Detection*



- Identification of
 - Hard Cuts
 - Soft Cuts, as e.g., Dissolve, Wipe, Cross-Fade, etc.
 - Drop Outs

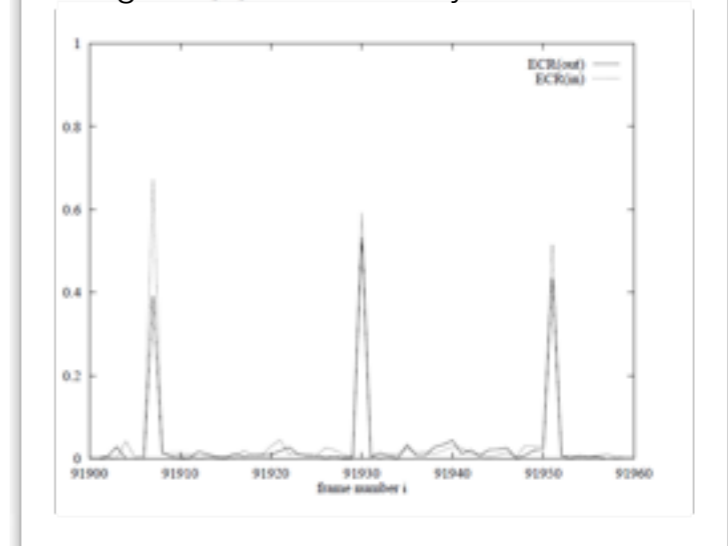
Analytical Shot Boundary Detection

- Analysis of Luminance/Chrominance Histograms
- Analysis of Edge Distribution
- Analysis of Motion Vectors

Machine Learning

- Classification of Hard/Soft Cuts based on Image Features
- K-Nearest Neighbor
- Random Forrest
- Support Vector Machines

Histogram Difference Analysis



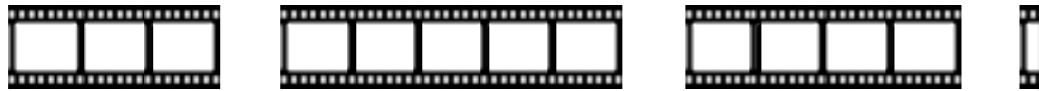
Motion Vector Analysis



Strukturelle Analyse

- Shot Boundary Detection

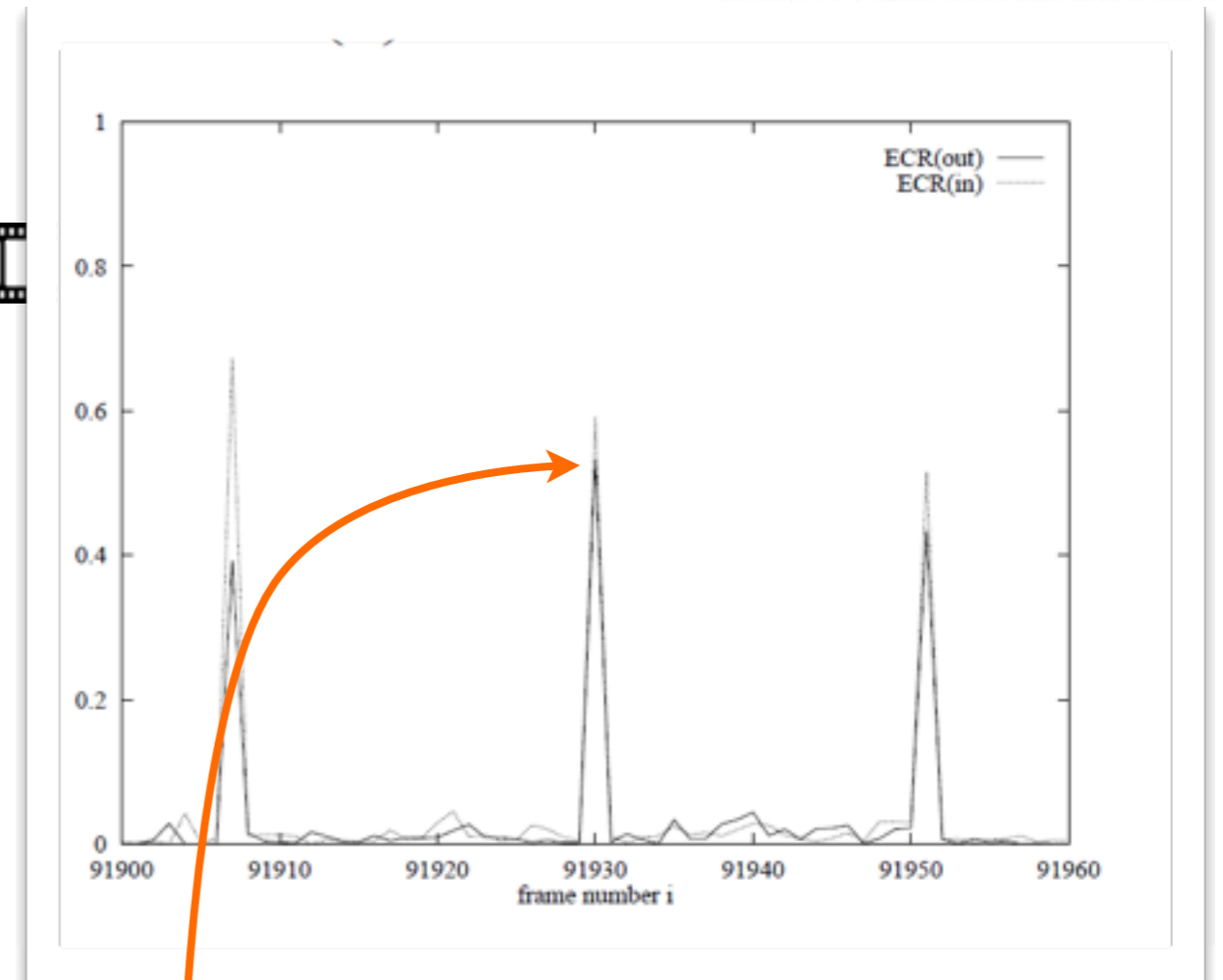
shots



- Identification of
 - **Hard Cuts**

Feature Analysis

- Luminance Histogram Difference
- Chrominance Histogram Difference
- Edge Distribution



91927

91928

91929

91930

91931

91932

Strukturelle Analyse

- *Shot Boundary Detection*

shots



- Identification of
 - Hard Cuts
 - **Drop Outs**

Histogram/Chrominance Difference Analysis



Drop Out

Strukturelle Analyse

- *Shot Boundary Detection*

shots



- Identification of
 - Hard Cuts
 - Drop Outs
 - Soft Cuts, as e.g., Dissolve, Wipe, Cross-Fade, etc.



Fade Out



Fade In

Strukturelle Analyse

- *Shot Boundary Detection*

shots



- Identification of
 - Hard Cuts
 - Drop Outs
 - Soft Cuts, as e.g., Dissolve, Wipe, Cross-Fade, etc.

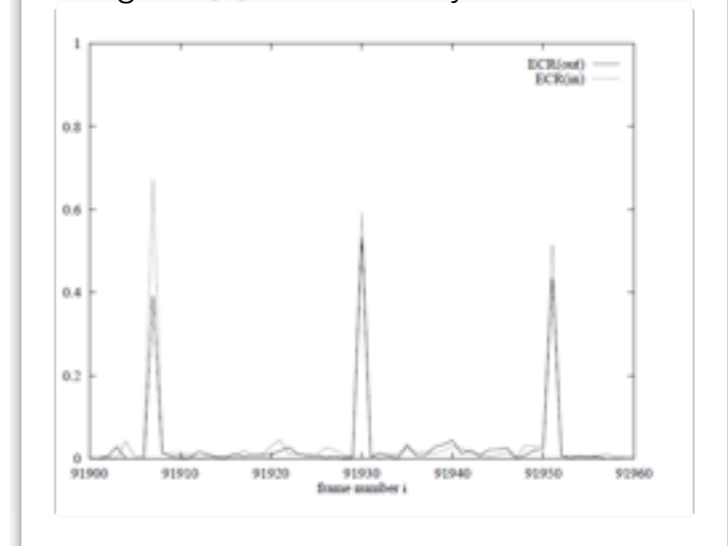
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Histogram Difference Analysis



Motion Vector Analysis



Automatisierte Audio- und Videoanalyse

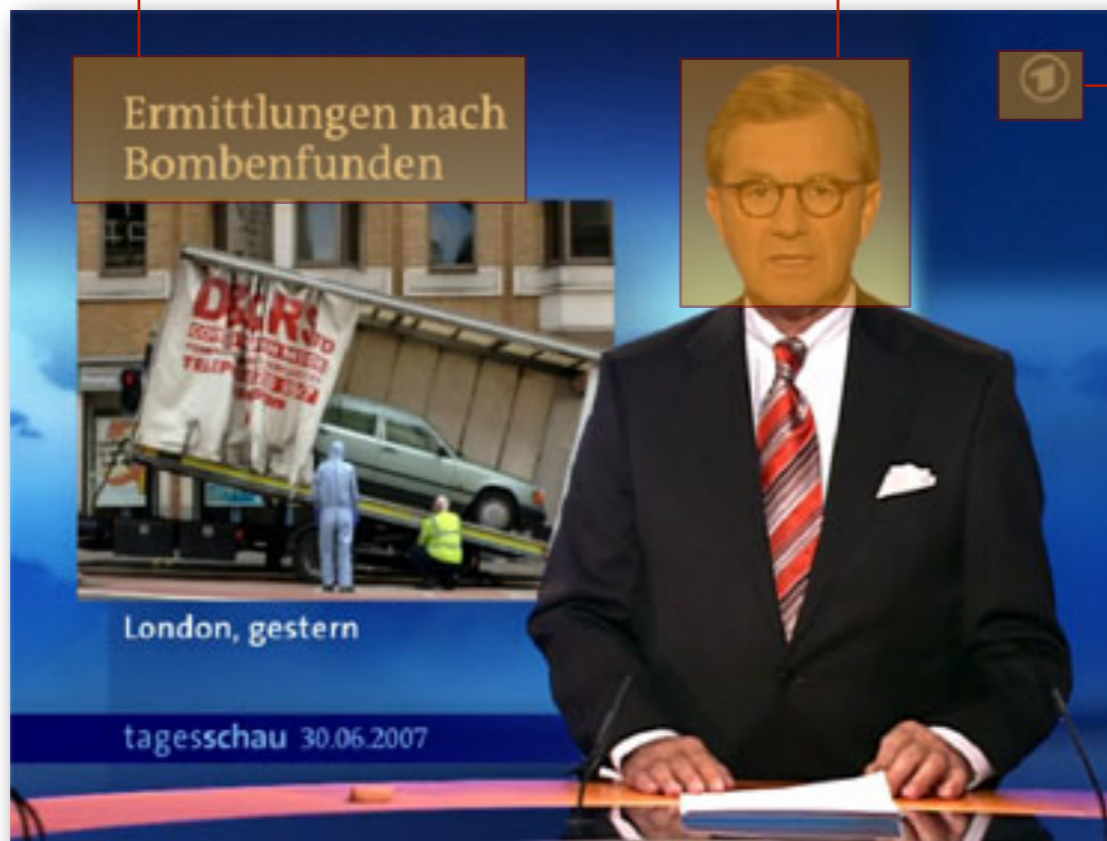


Character Detection
Character Recognition

Face-Detection
Face Clustering
Face Tracking

Logo-Detection

Genre
Detection



Automatisierte Audio- und Videoanalyse

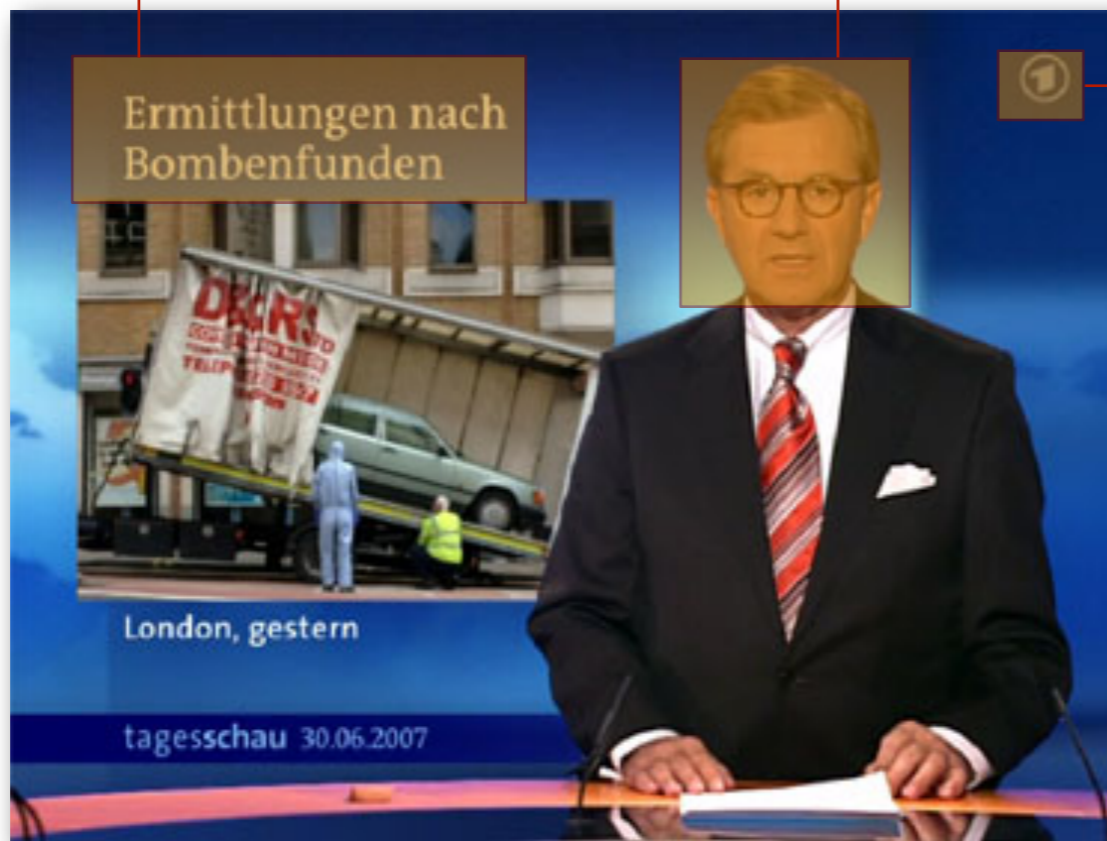


Character Detection
Character Recognition

Face-Detection
Face Clustering
Face Tracking

Logo-Detection

Genre
Detection



Automatisierte Audio- und Videoanalyse



Intelligent Character Recognition

- **Preprocessing**
 - **Character Identification**
 - Text Preprocessing
 - Text Filtering
 - Adaption of script geometry (Deskew)
 - Image quality enhancement
- **Optical Character Recognition (OCR)**
 - Standard OCR software (OCRopus)
- **Postprocessing**
 - Lexical analysis
 - Statistical / context based filtering



Ermittlungen nach
Bombenfunden

Ermittlungen nach
Bombenfunden

Ermittlungen nach
Bombenfunden

Intelligent Character Recognition



- **Preprocessing**

- Character Identification

Filtering

- **Local Binary Patterns (LBP)**
- Histogram of Oriented Gradients



Intelligent Character Recognition



- **Preprocessing**

- Character Identification

Filtering

- Local Binary Patterns (LBP)
- **Histogram of Oriented Gradients**



Intelligent Character Recognition



- **Preprocessing**
 - Character Identification
 - Filtering
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 - **Histogram of Oriented Gradients**



Automatisierte Audio- und Videoanalyse



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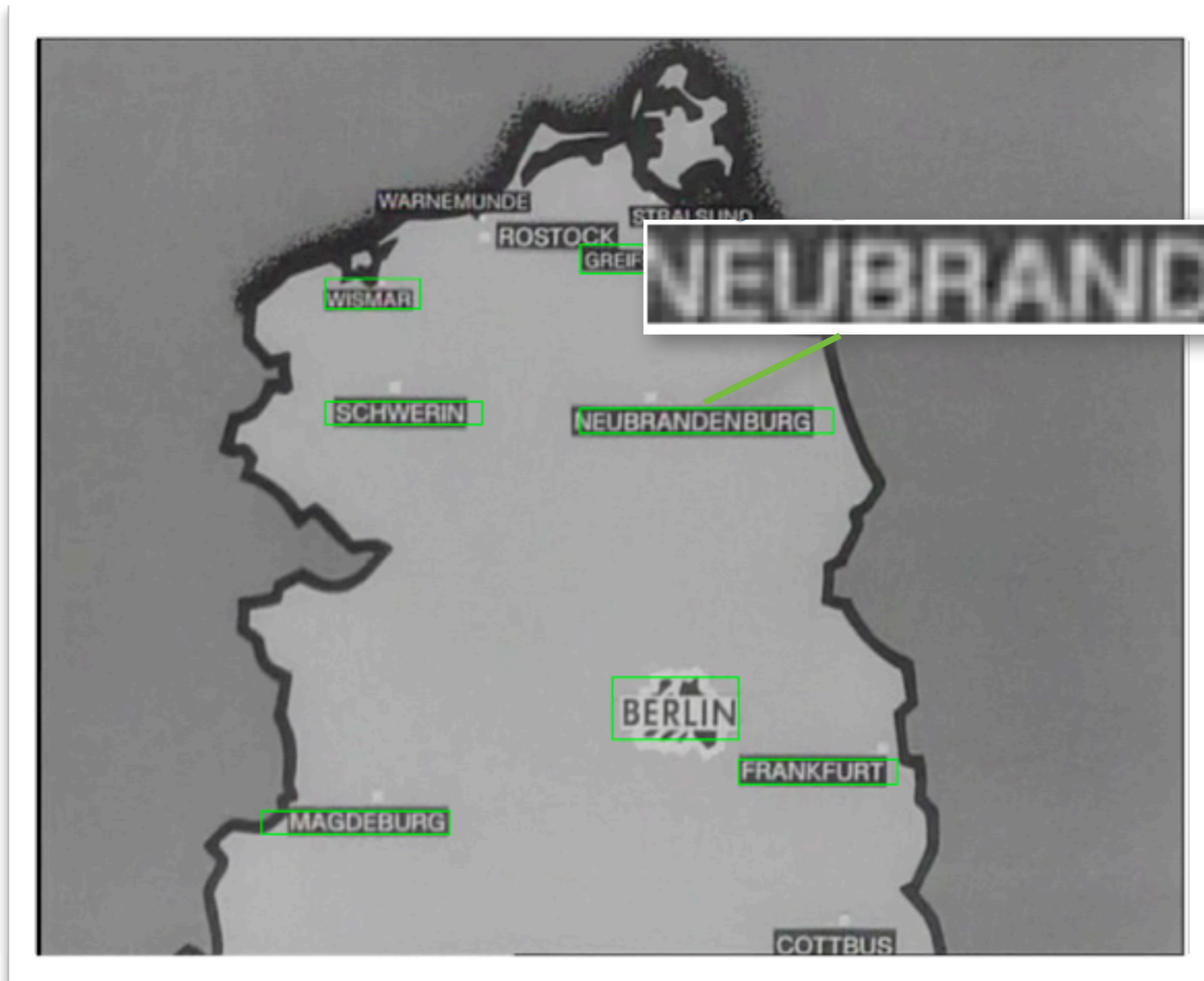


Ermittlungen nach
Bombenfunden

Ermittlungen nach
Bombenfunden

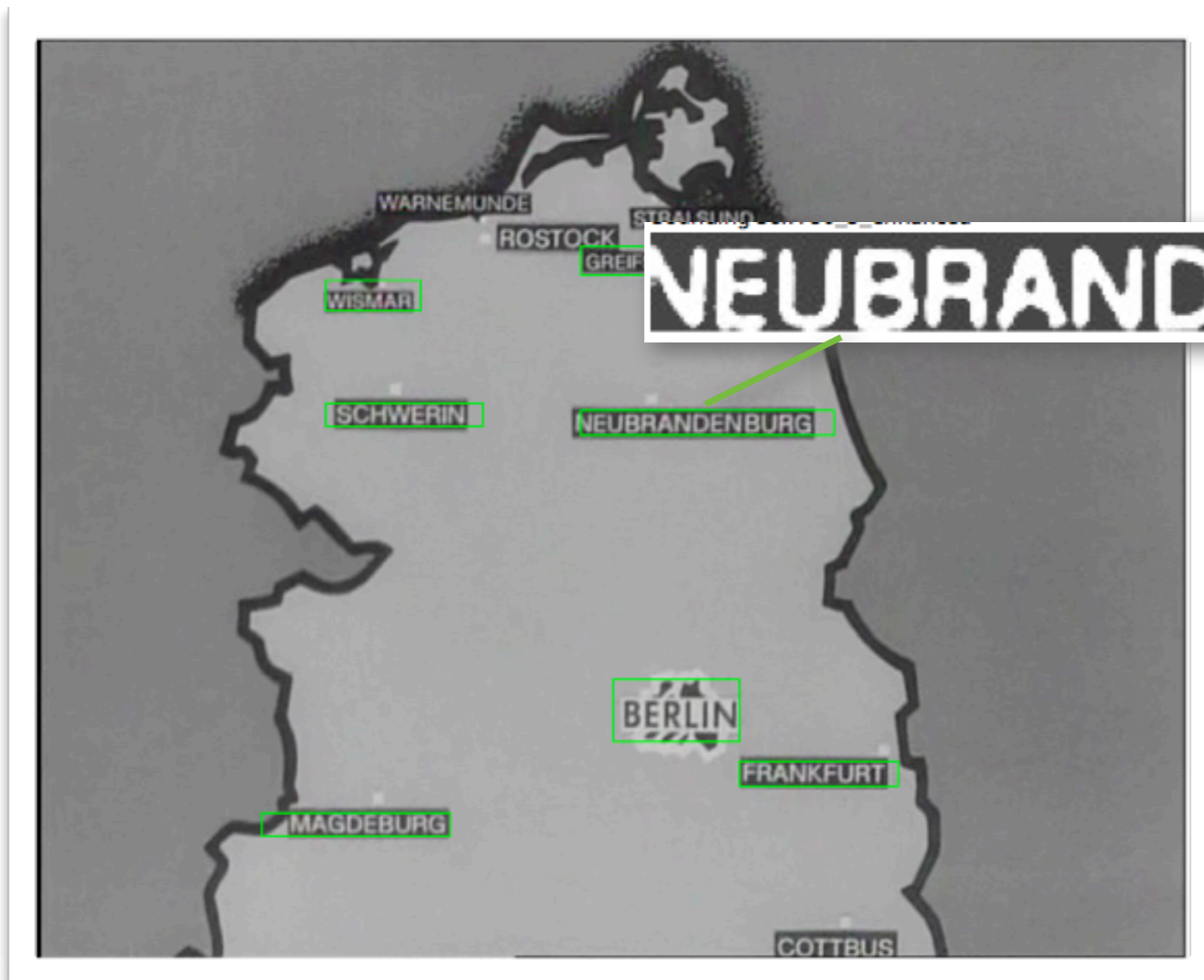
Ermittlungen nach
Bombenfunden

Intelligent Character Recognition



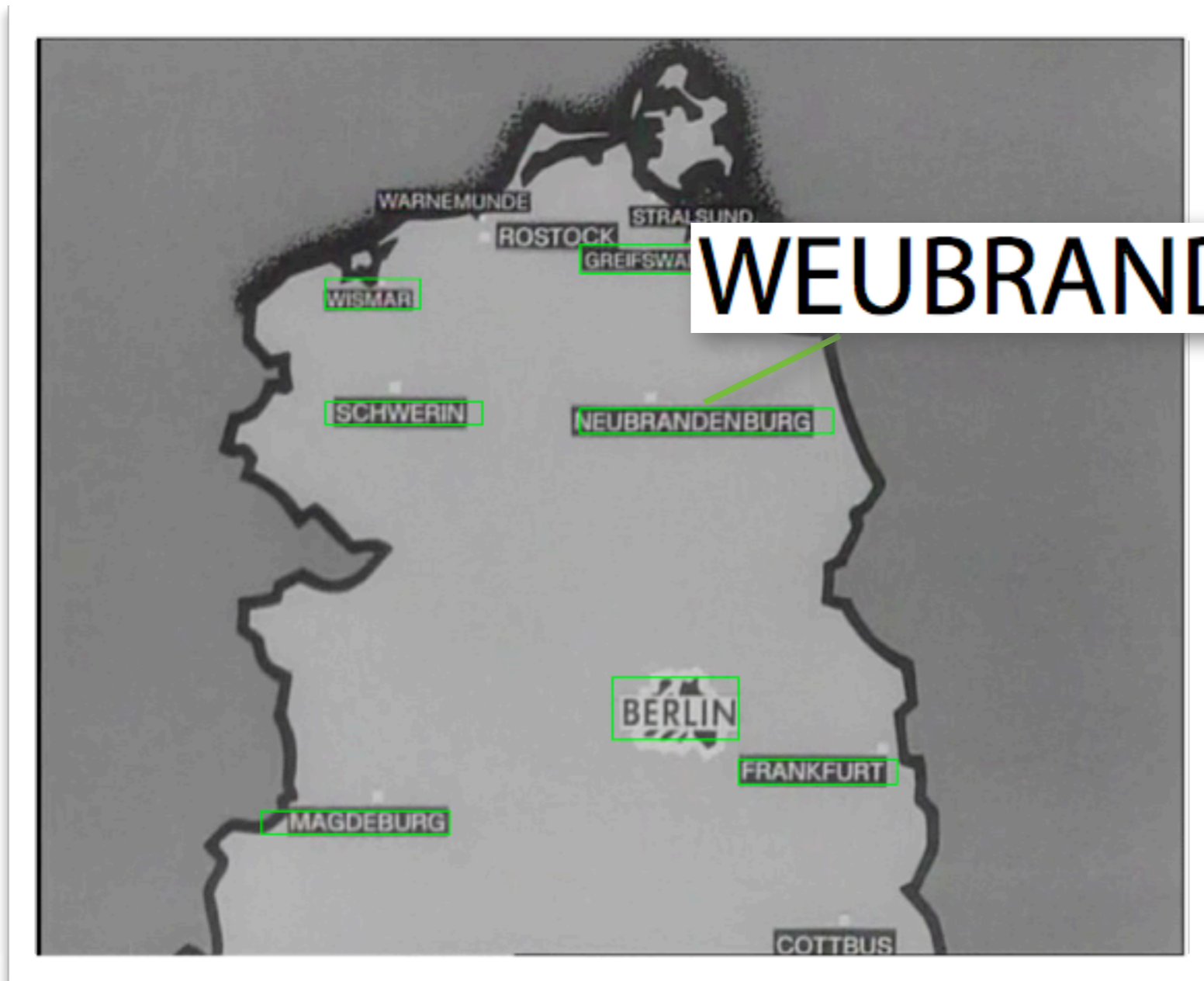
Original Image Bounding Box

Intelligent Character Recognition



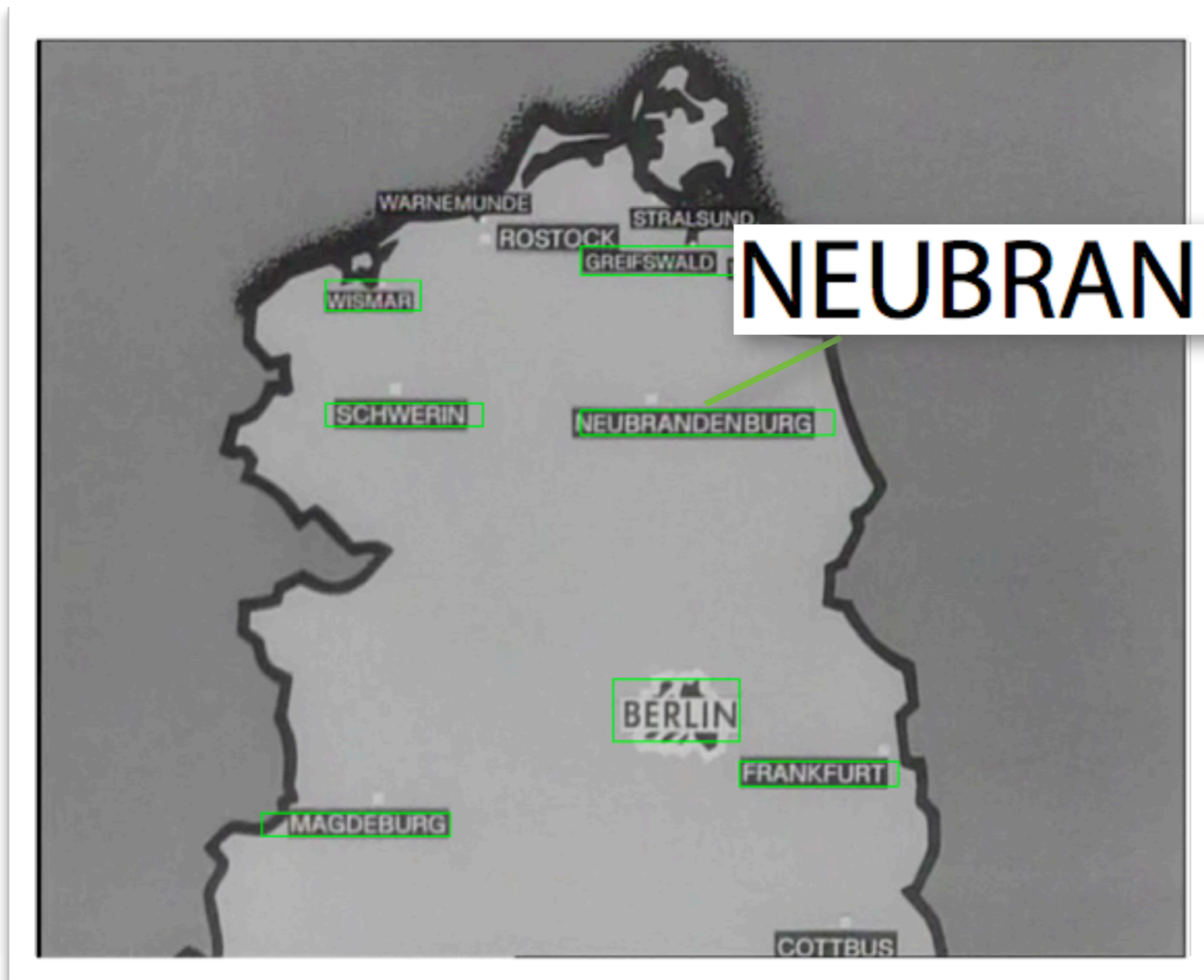
Advanced Image Enhancement

Intelligent Character Recognition



Standard OCR (OCRopus)

Intelligent Character Recognition



Context-based Spell Correction

Semantische Analyse...

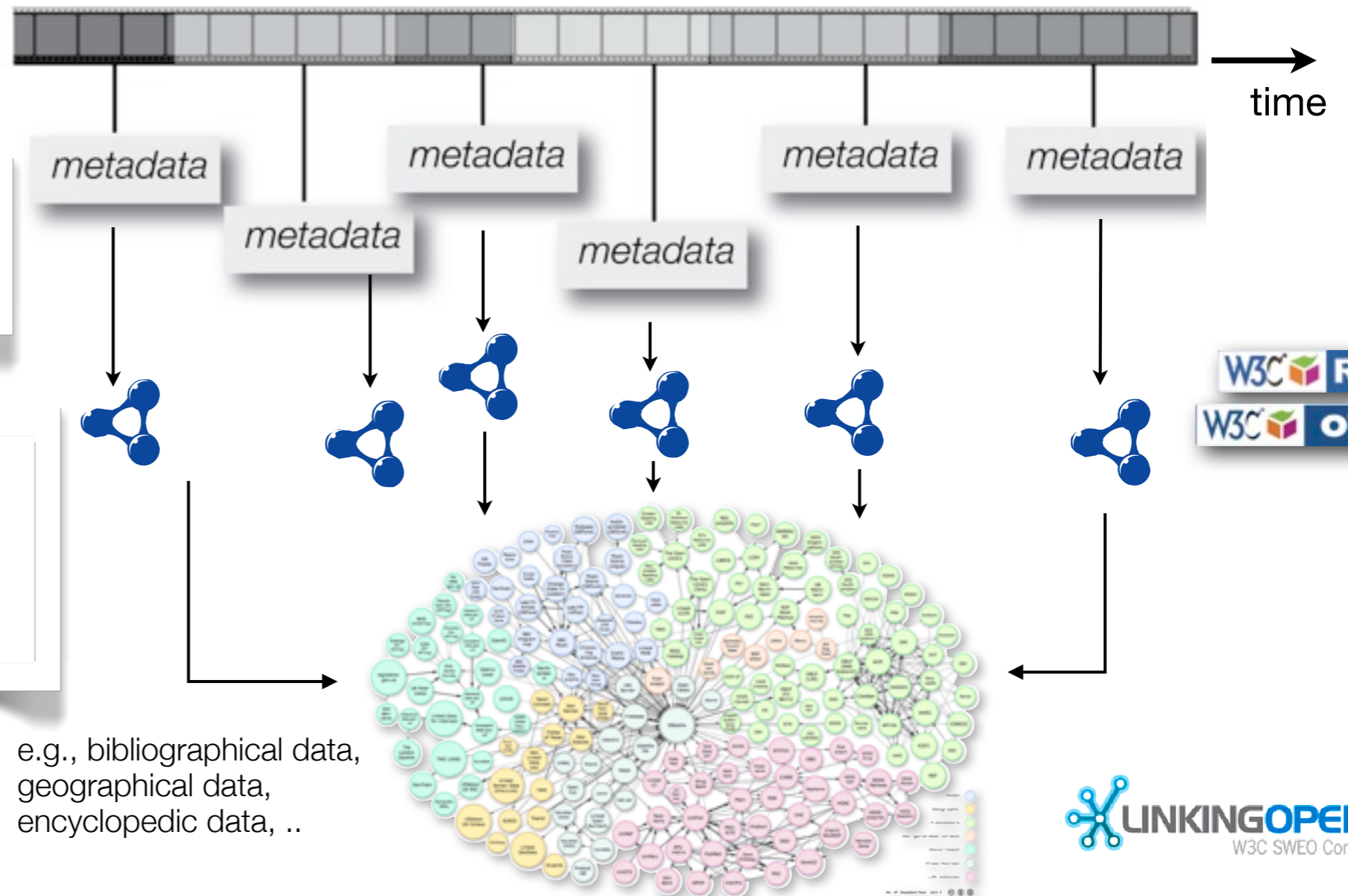
Semantische Analyse



**Video Analyse /
Metadaten Extraktion**

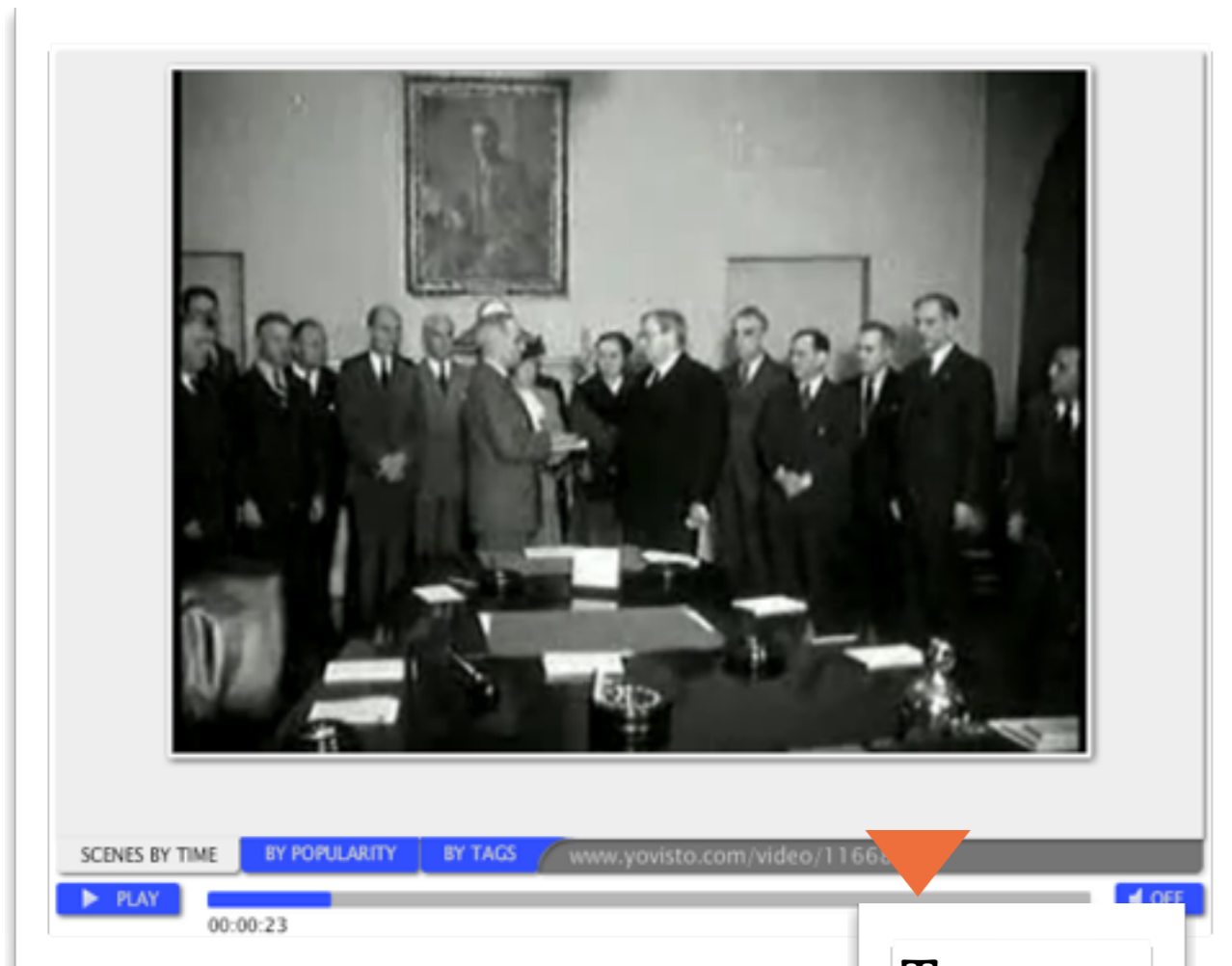
**Entity Recognition/
Mapping**

e.g.,
person xy
location yz
event abc



Semantische Analyse

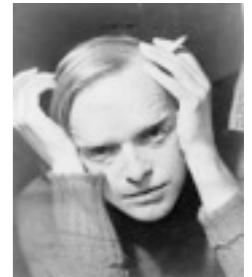
- *Named Entity Recognition*
 - Mapping keyterms (text) to semantic entities
 - **Context Analysis** and **Disambiguation**



Keyterm / User Tag

Semantic Entities

Truman Capote



?

Harry S. Truman



?

Truman, Minnesota



?

The Truman Show



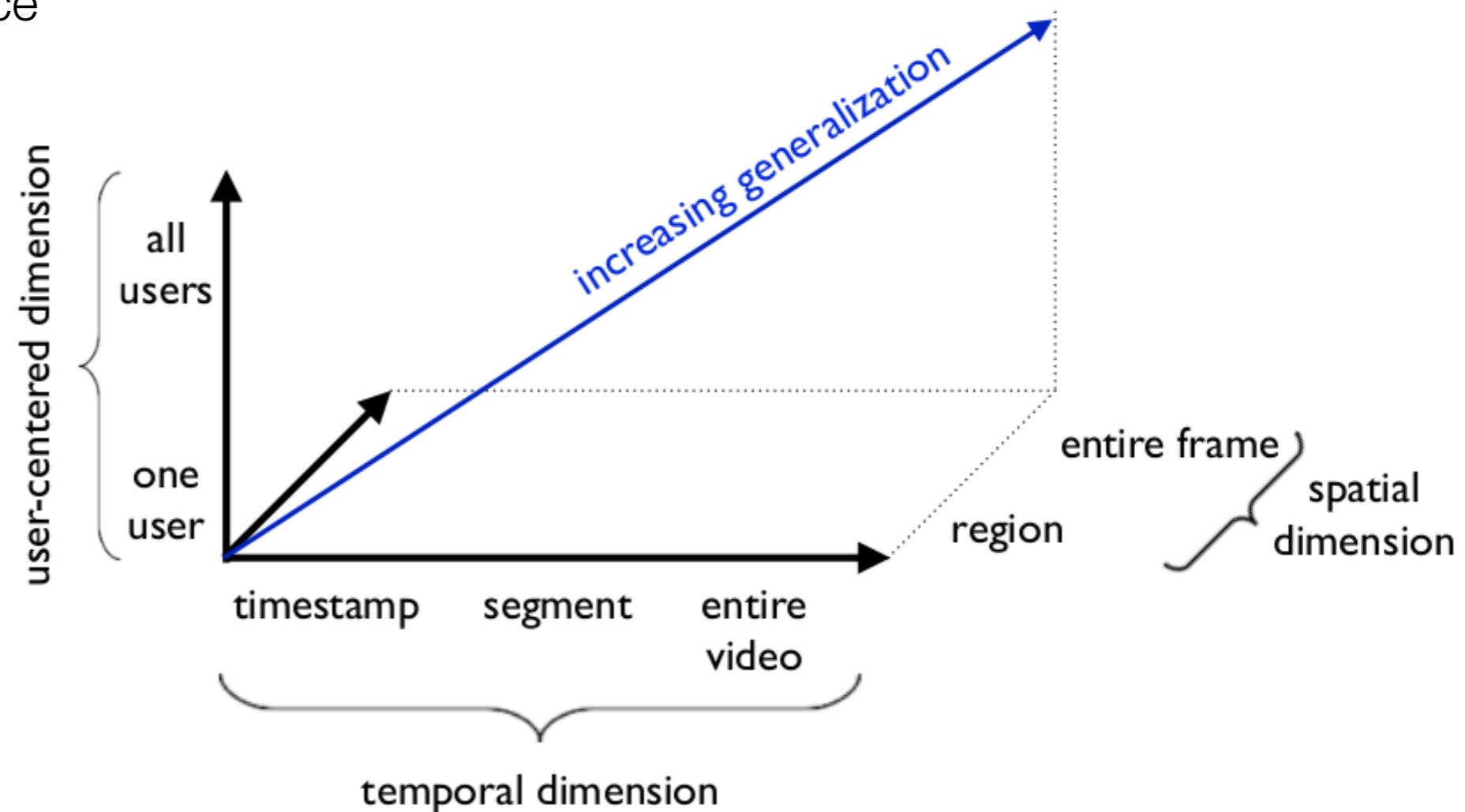
?

Semantische Analyse

Contextanalyse und Disambiguierung

What defines a Context in AV-Data?

- Provenance (user centered)
- Temporal Coherence
- Spatial Coherence

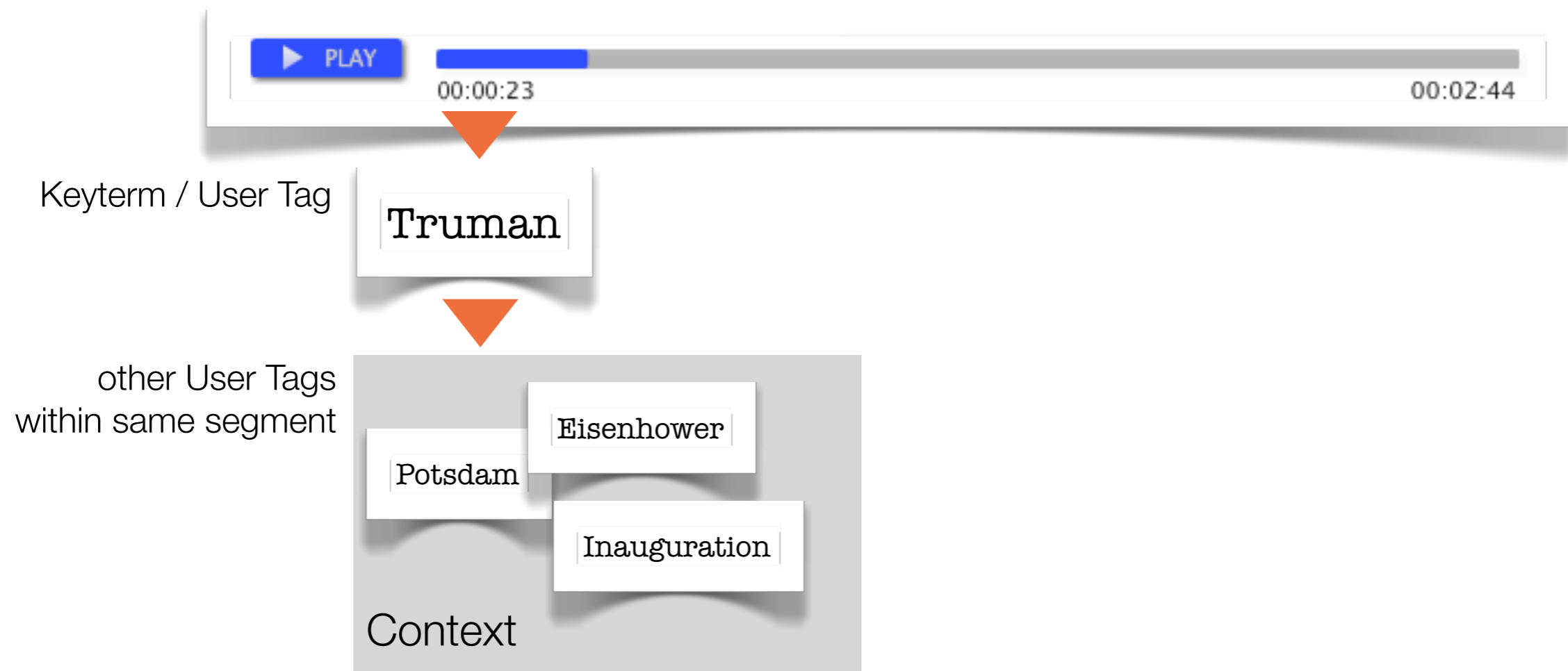


Semantische Analyse

Contextanalyse und Disambiguierung

What defines a Context in AV-Data?

- **Temporal Coherence**
- Spatial Coherence
- **Provenance**



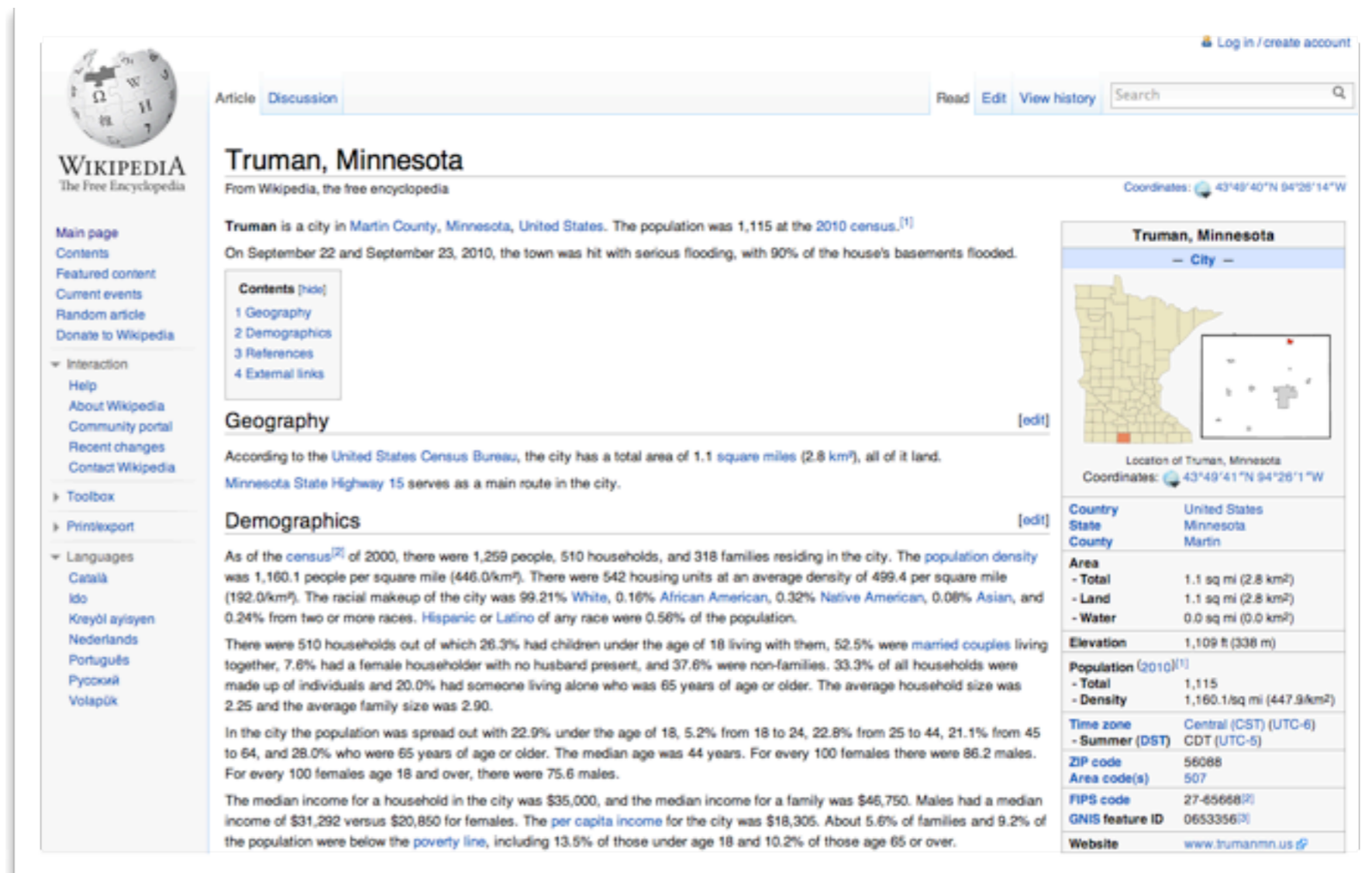
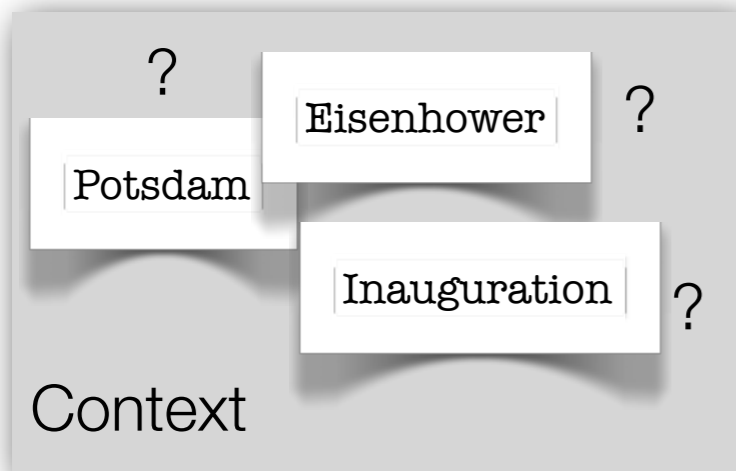
Semantische Analyse

Contextanalyse und Disambiguierung

(1) Co-occurrence Analyse

based on wikipedia

Truman



Truman, Minnesota
From Wikipedia, the free encyclopedia

Coordinates: 43°49′40″N 94°26′14″W﻿ / ﻿43.82778°N 94.43722°W﻿ / 43.82778; -94.43722

Truman is a city in Martin County, Minnesota, United States. The population was 1,115 at the 2010 census.^[1] On September 22 and September 23, 2010, the town was hit with serious flooding, with 90% of the house's basements flooded.

Contents [hide]

- Geography
- Demographics
- References
- External links

Geography [edit]

According to the **United States Census Bureau**, the city has a total area of 1.1 square miles (2.8 km²), all of it land. **Minnesota State Highway 15** serves as a main route in the city.

Demographics [edit]

As of the **census**^[2] of 2000, there were 1,259 people, 510 households, and 318 families residing in the city. The population density was 1,160.1 people per square mile (446.0/km²). There were 542 housing units at an average density of 499.4 per square mile (192.0/km²). The racial makeup of the city was 99.21% White, 0.16% African American, 0.32% Native American, 0.08% Asian, and 0.24% from two or more races. Hispanic or Latino of any race were 0.56% of the population.

There were 510 households out of which 26.3% had children under the age of 18 living with them, 52.5% were married couples living together, 7.6% had a female householder with no husband present, and 37.6% were non-families. 33.3% of all households were made up of individuals and 20.0% had someone living alone who was 65 years of age or older. The average household size was 2.25 and the average family size was 2.90.

In the city the population was spread out with 22.9% under the age of 18, 5.2% from 18 to 24, 22.8% from 25 to 44, 21.1% from 45 to 64, and 28.0% who were 65 years of age or older. The median age was 44 years. For every 100 females there were 86.2 males. For every 100 females age 18 and over, there were 75.6 males.

The median income for a household in the city was \$35,000, and the median income for a family was \$46,750. Males had a median income of \$31,292 versus \$20,850 for females. The *per capita* income for the city was \$18,305. About 5.6% of families and 9.2% of the population were below the *poverty line*, including 13.5% of those under age 18 and 10.2% of those age 65 or over.

Country	United States
State	Minnesota
County	Martin
Area	
- Total	1.1 sq mi (2.8 km ²)
- Land	1.1 sq mi (2.8 km ²)
- Water	0.0 sq mi (0.0 km ²)
Elevation	1,109 ft (338 m)
Population (2010) ^[1]	
- Total	1,115
- Density	1,160.1/sq mi (447.9/km ²)
Time zone	Central (CST) (UTC-6)
- Summer (DST)	CDT (UTC-5)
ZIP code	56088
Area code(s)	507
FIPS code	27-65668 ^[2]
GNIS feature ID	0653356 ^[3]
Website	www.trumanmn.us

Do context terms co-occur in matching wikipedia article?

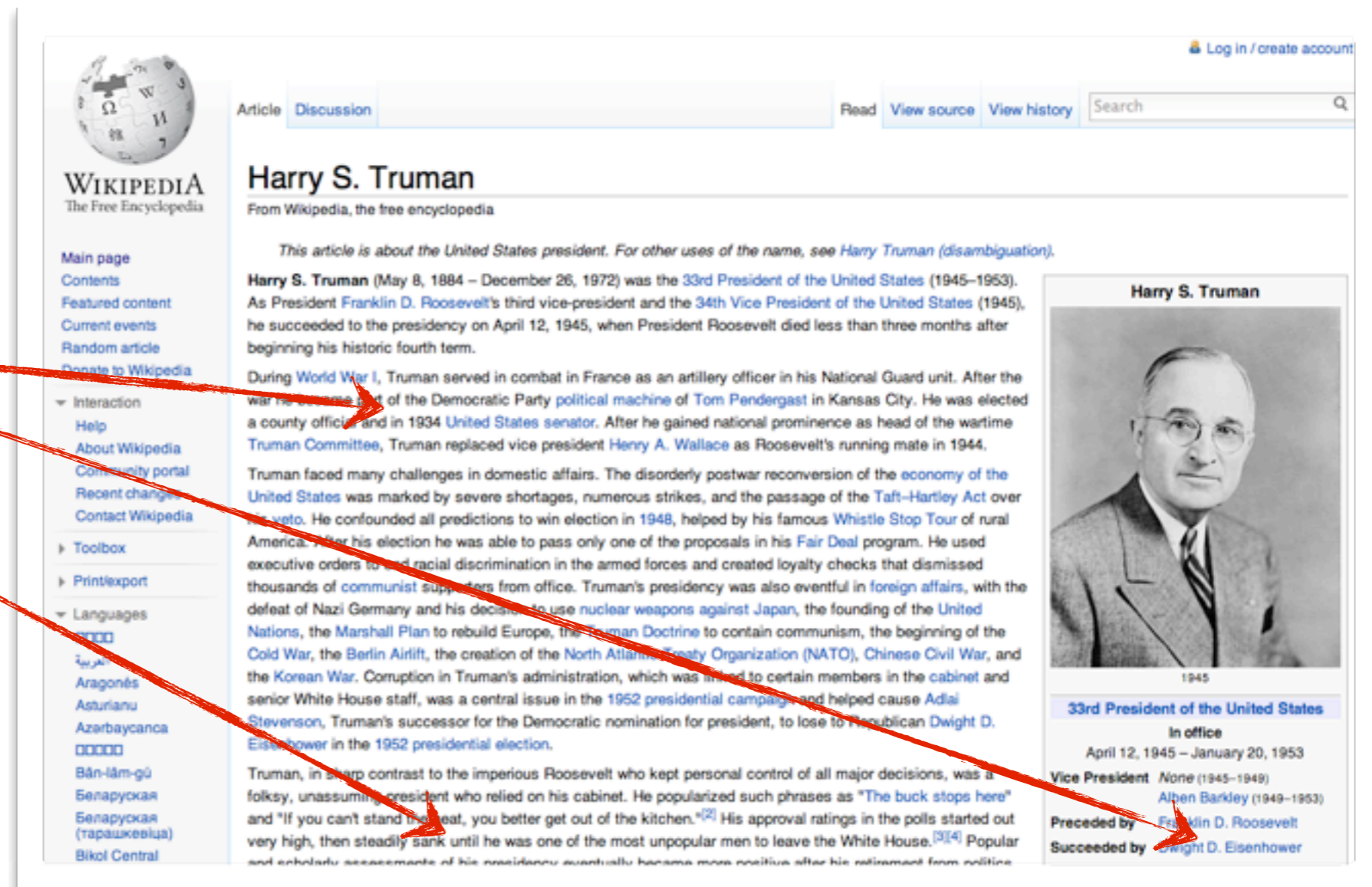
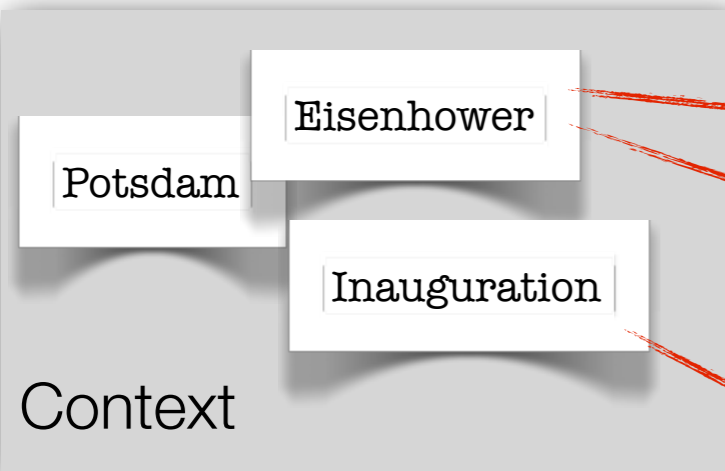
Semantische Analyse

Contextanalyse und Disambiguierung

(1) Co-occurrence Analyse

based on wikipedia

Truman



WIKIPEDIA The Free Encyclopedia

Harry S. Truman

From Wikipedia, the free encyclopedia

This article is about the United States president. For other uses of the name, see [Harry Truman \(disambiguation\)](#).

Harry S. Truman (May 8, 1884 – December 26, 1972) was the 33rd President of the United States (1945–1953). As President Franklin D. Roosevelt's third vice-president and the 34th Vice President of the United States (1945), he succeeded to the presidency on April 12, 1945, when President Roosevelt died less than three months after beginning his historic fourth term.

During World War I, Truman served in combat in France as an artillery officer in his National Guard unit. After the war he became part of the Democratic Party political machine of Tom Pendergast in Kansas City. He was elected a county official and in 1934 United States senator. After he gained national prominence as head of the wartime Truman Committee, Truman replaced vice president [Henry A. Wallace](#) as Roosevelt's running mate in 1944.

Truman faced many challenges in domestic affairs. The disorderly postwar reconversion of the economy of the United States was marked by severe shortages, numerous strikes, and the passage of the Taft–Hartley Act over his veto. He confounded all predictions to win election in 1948, helped by his famous Whistle Stop Tour of rural America. After his election he was able to pass only one of the proposals in his Fair Deal program. He used executive orders to end racial discrimination in the armed forces and created loyalty checks that dismissed thousands of communist supporters from office. Truman's presidency was also eventful in foreign affairs, with the defeat of Nazi Germany and his decision to use nuclear weapons against Japan, the founding of the United Nations, the Marshall Plan to rebuild Europe, the Truman Doctrine to contain communism, the beginning of the Cold War, the Berlin Airlift, the creation of the North Atlantic Treaty Organization (NATO), Chinese Civil War, and the Korean War. Corruption in Truman's administration, which was linked to certain members in the cabinet and senior White House staff, was a central issue in the 1952 presidential campaign, and helped cause [Adlai Stevenson](#), Truman's successor for the Democratic nomination for president, to lose to Republican [Dwight D. Eisenhower](#) in the 1952 presidential election.

Truman, in sharp contrast to the imperious Roosevelt who kept personal control of all major decisions, was a folksy, unassuming president who relied on his cabinet. He popularized such phrases as "The buck stops here" and "If you can't stand the heat, you better get out of the kitchen."^[2] His approval ratings in the polls started out very high, then steadily sank until he was one of the most unpopular men to leave the White House.^{[3][4]} Popular and scholarly assessments of his presidency eventually became more positive after his retirement from politics.

Harry S. Truman

1945

33rd President of the United States

In office
April 12, 1945 – January 20, 1953

Vice President [None](#) (1945–1949)

Preceded by [Franklin D. Roosevelt](#)

Succeeded by [Dwight D. Eisenhower](#)

Disambiguation by statistical frequency

Semantische Analyse

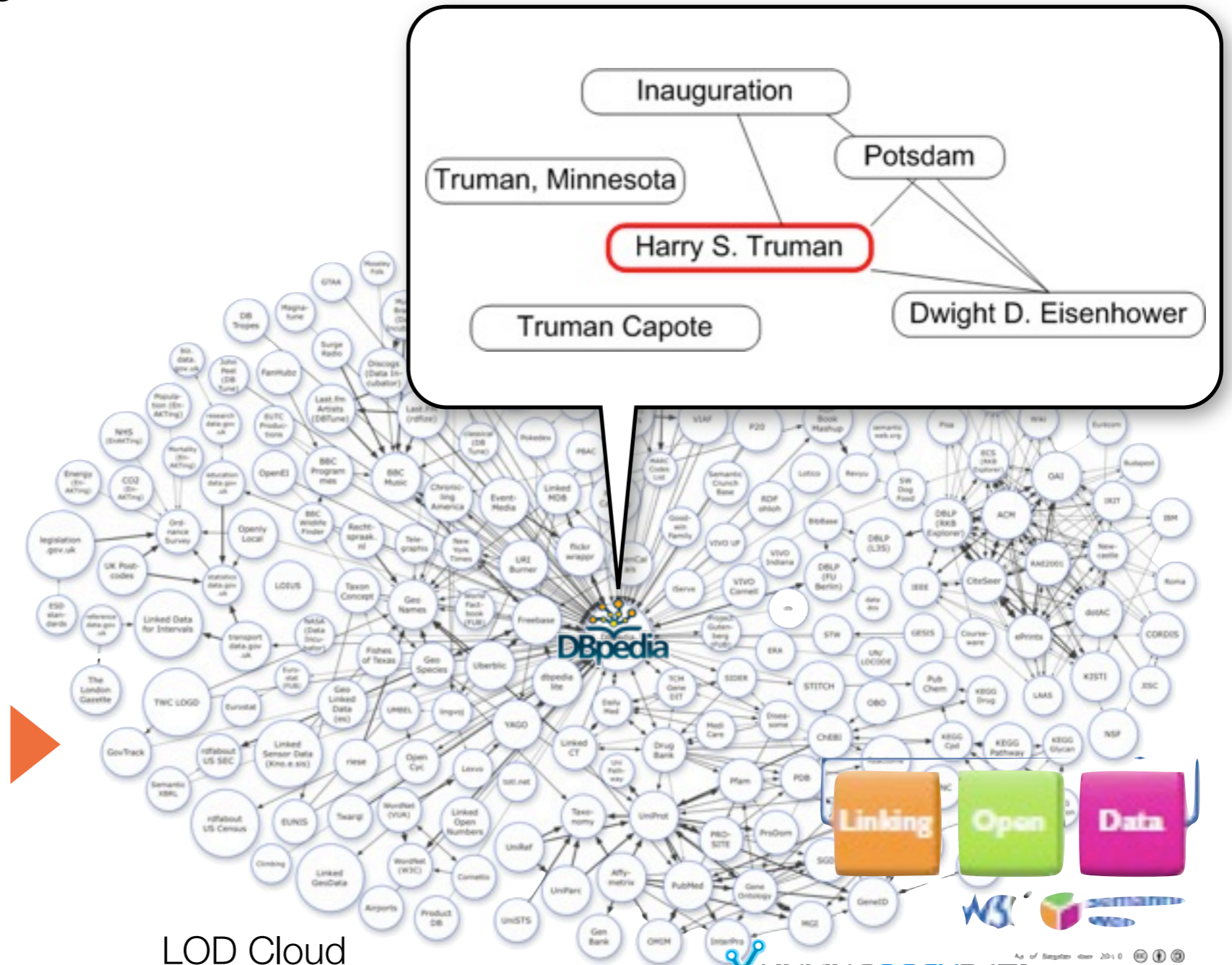
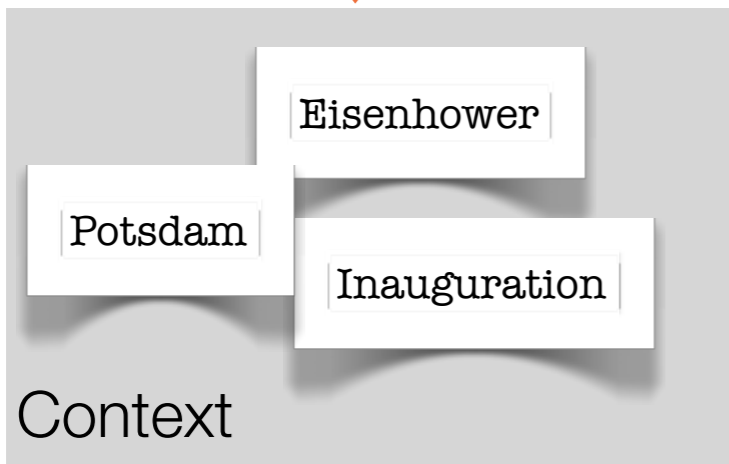
Contextanalyse und Disambiguierung

(2) Semantic Graph Analysis



Keyterm / User Tag

Truman



LOD Cloud

Suchen ist nicht gleich
Suchen....

Suchen ist nicht gleich Suchen

- Ein einfaches Beispiel:

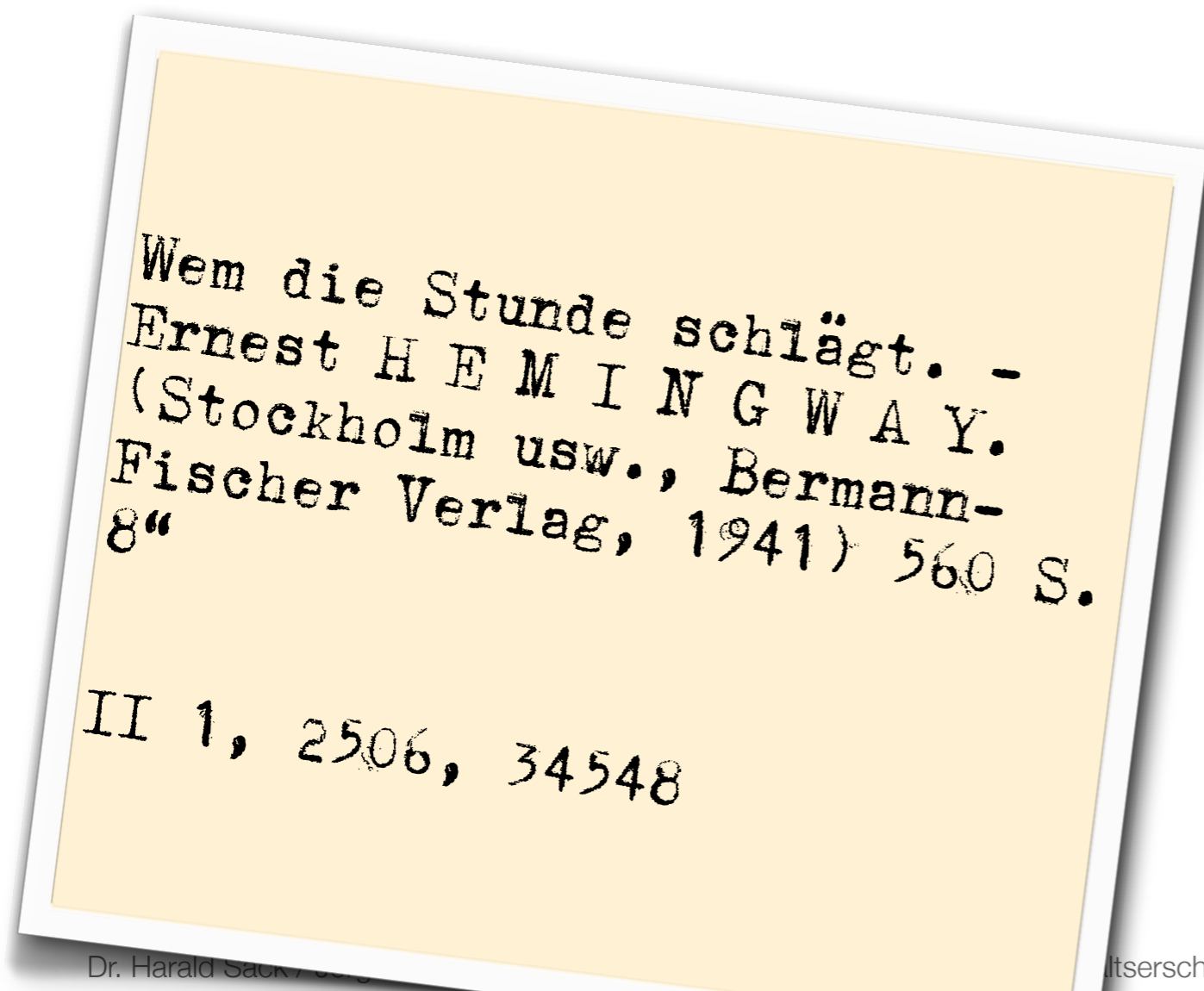
Ich suche das Buch „Wem die Stunde schlägt“ von Ernest Hemingway in der ersten deutschen Ausgabe...



Suchen ist nicht gleich Suchen

- Ein einfaches Beispiel:

Ich suche das Buch „Wem die Stunde schlägt“ von Ernest Hemingway in der ersten deutschen Ausgabe...



Suchen ist nicht gleich Suchen

- ...aber was, wenn man nicht genau weiß, was man sucht?

Mir hat das Buch „Wem die Stunde schlägt“ von Ernest Hemingway gefallen und ich weiß nicht genau, was ich als nächstes lesen soll....



Explorative Suche

- Was, wenn der Benutzer nicht weiß, **welchen Suchbegriff** er/sie benutzen soll?
- Was, wenn der Benutzer **komplexere Antworten** sucht?
- Was, wenn er/sie das **Wissensgebiet**, über das er sich informieren will, **nicht (gut) kennt**?
- Was, wenn er/sie wissen möchte, welche Dokumente es **insgesamt** zu einem speziellen Thema in einem Repository gibt?

- ...*„Stöbern“* statt *„Suchen“*
- ...*etwas „zufällig“* finden
- ...*Serendipity*
- ...*einen Überblick gewinnen*



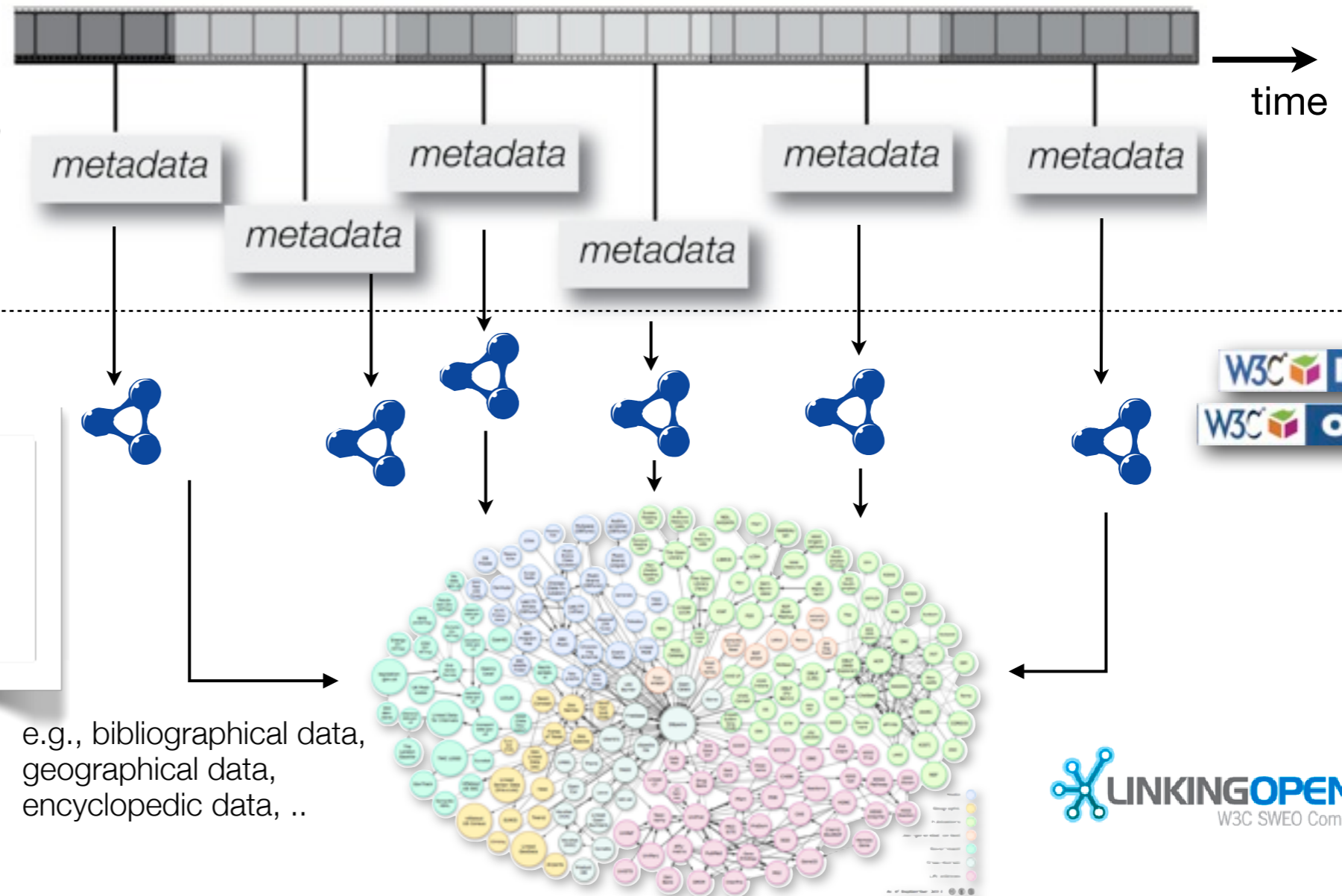
Wie kann man eine
explorative Suche
realisieren?

Semantische Videosuche...

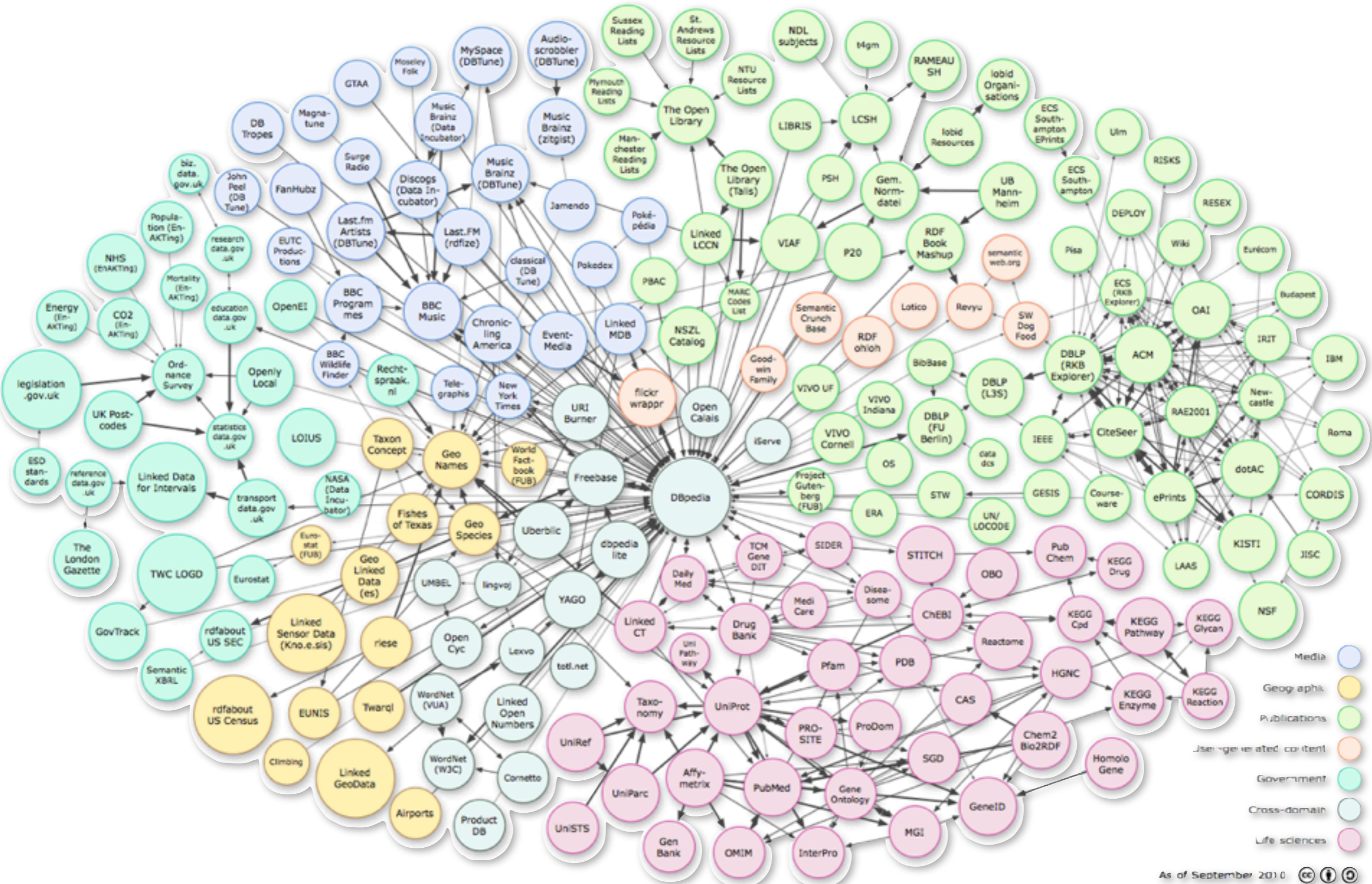


**Video Analyse /
Metadaten Extraktion**

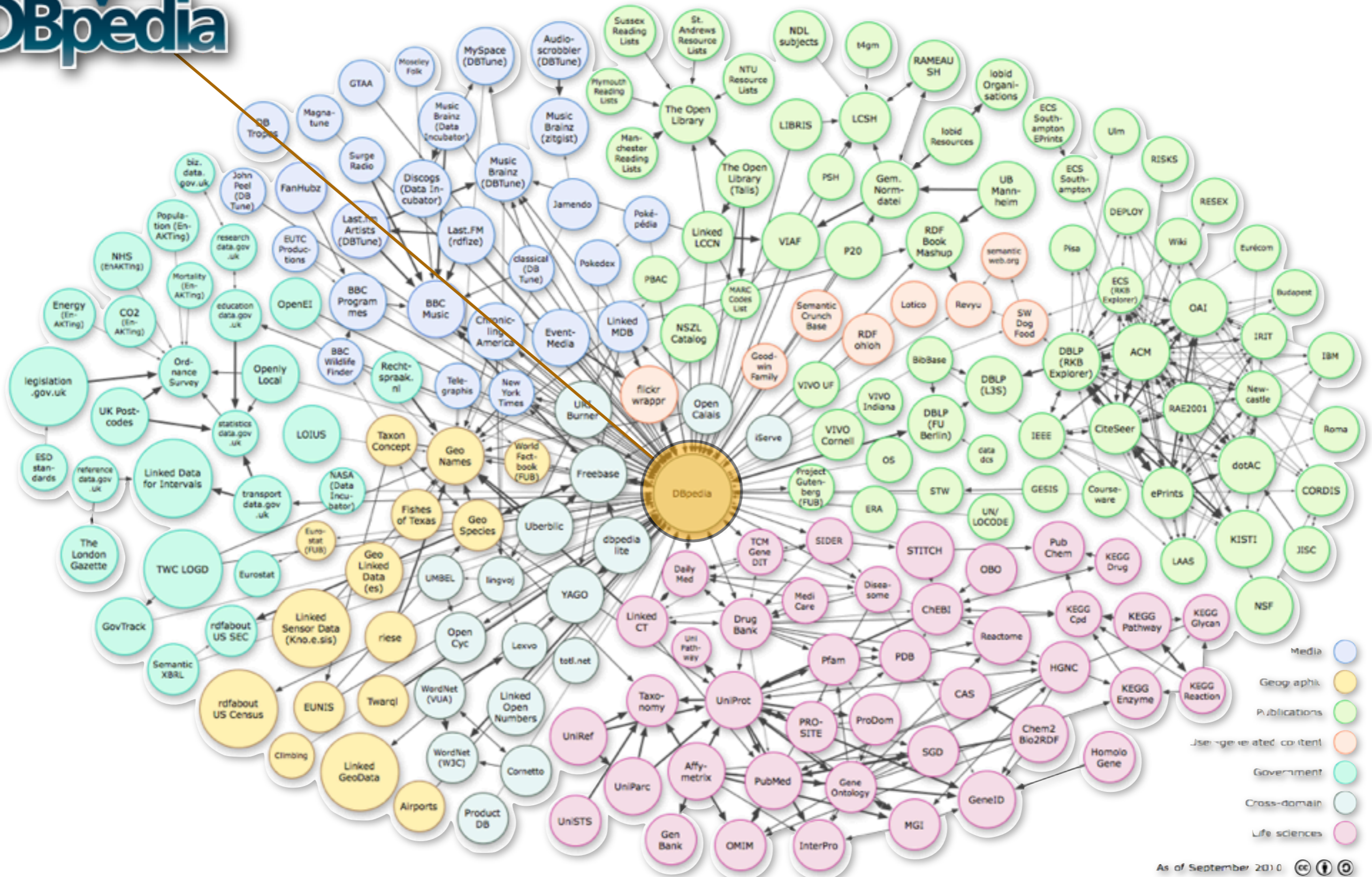
**Entity Recognition /
Mapping**



The Web of Data - The Semantic Web



Data is a precious thing and will last longer than the systems themselves. (Tim Berners-Lee)



DBpedia - die semantische Wikipedia

- Zentraler Bestandteil: Wikipedia Info-Boxen



Potsdam

Koordinaten: 52° 24′ N, 13° 4′ O﻿(Karte)

Der Titel dieses Artikels ist mehrdeutig. Weitere Bedeutungen sind unter Potsdam (Begriffsklärung) aufgeführt.

Potsdam ist die Hauptstadt und einwohnerreichste Stadt des Landes **Brandenburg**. Sie grenzt im Nordosten unmittelbar an die deutsche Hauptstadt **Berlin** und gehört zur europäischen **Metropolregion Berlin/Brandenburg**. Potsdam ist vor allem bekannt für sein historisches Vermächtnis als ehemalige Residenzstadt **Preußens** mit den zahlreichen und einzigartigen Schloss- und Parkanlagen. Die Kulturlandschaften wurden 1990 von der **UNESCO** als größtes Ensemble der deutschen Welterbestätten in die **Liste des Weltkultur- und Naturerbes der Menschheit** aufgenommen.^[2] Potsdam entwickelte sich seit der Mitte des 19. Jahrhunderts zu einem Wissenschaftszentrum. Heute sind drei öffentliche **Hochschulen** und mehr als 30 Forschungsinstitute in der Stadt ansässig. Rund 15 Prozent der Einwohner sind **Studenten**. Das traditionsreiche ehemalige **UFA-Filmstudio Babelsberg** ist eines der führenden Zentren der Film- und Fernsehproduktion in Europa. Es verfügt über große Kapazitäten an moderner Ausstattung und entwickelt sich zunehmend als Produktionsstätte für internationale Filmprojekte.^[3]

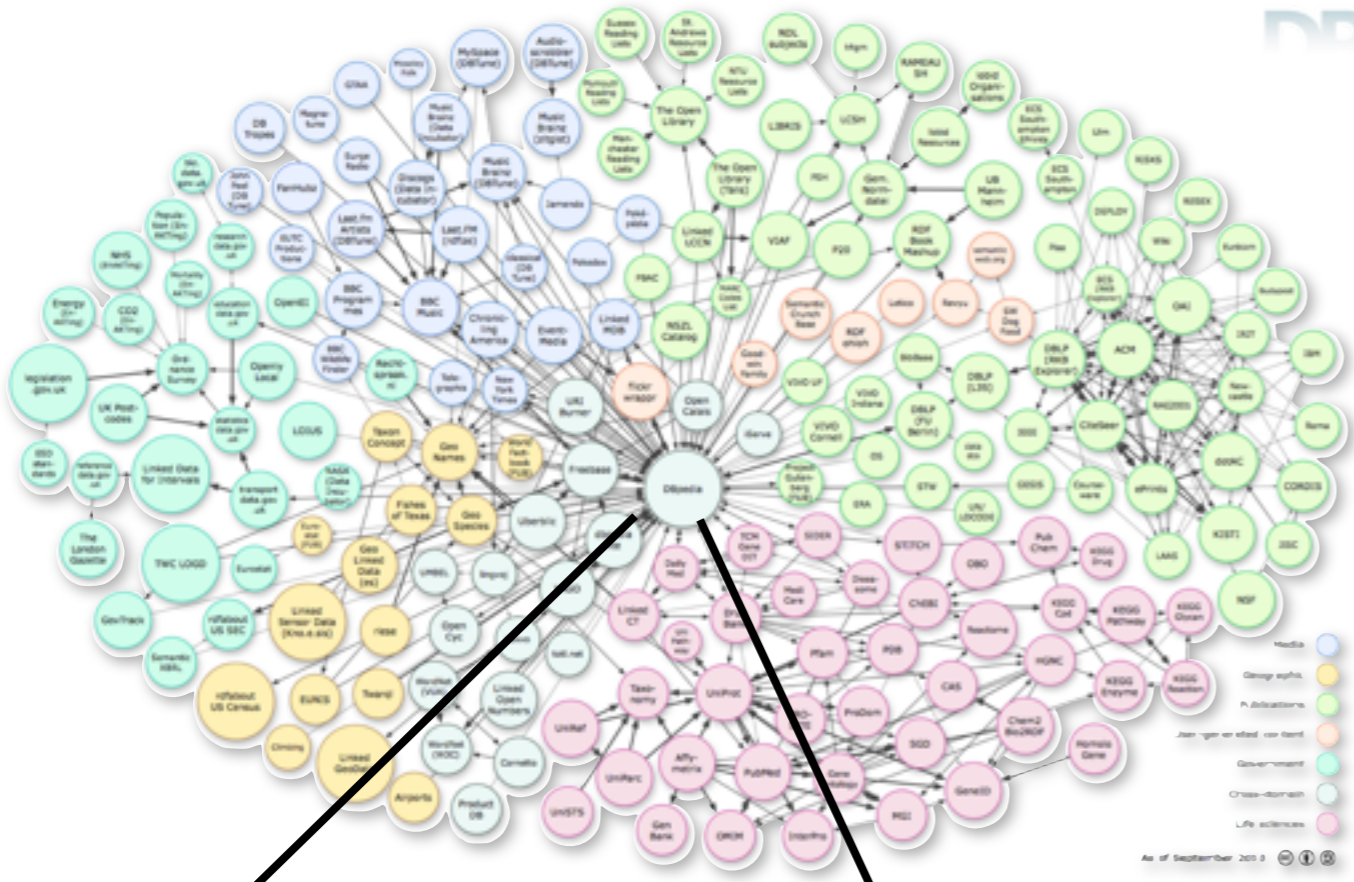
Basisdaten	
Bundesland:	Brandenburg
Landkreis:	Kreisfreie Stadt
Höhe:	35 m ü. NN
Fläche:	187,27 km²
Einwohner:	154.606 (31. Dez. 2009) ^[1]
Bevölkerungsdichte:	826 Einwohner je km²
Postleitzahlen:	14401–14482
Vorwahl:	0331
Kfz-Kennzeichen:	P
Gemeineschlüssel:	12 0 54 000
Stadtgliederung:	7 Wohngebiete und 9 neue Ortsteile mit je einem Ortsbeirat
Adresse der Stadtverwaltung:	Friedrich-Ebert-Str. 79/81 14469 Potsdam
Webpräsenz:	potsdam.de
Oberbürgermeister:	Jann Jakobs (SPD)

Lage der Stadt Potsdam in Brandenburg

Inhaltsverzeichnis [Verbergen]

- Geografie
 - Geografische Lage
 - Nachbargemeinden
 - Stadtgliederung
 - Klima
- Geschichte
 - Gründung im Mittelalter
 - Residenzstadt und starker Aufschwung
 - Weimarer Republik und Nationalsozialismus
 - Geteiltes Deutschland
 - Wiedervereinigung und Landeshauptstadt
 - Militärgeschichte
 - Eingemeindungen
 - Einwohnerentwicklung und Demografie
- Religionen
 - Christentum
 - Judentum

Explorative Suche



About: [For Whom the Bell Tolls](#)
 An Entity of Type : [book](#), from Named Graph : <http://dbpedia.org>, within Data Space : [dbpedia.org](#)

Wem die Stunde schlägt (englisch *For Whom the Bell Tolls*) ist ein Roman von Ernest Hemingway aus dem Jahr 1940. Die bislang einzige in Stockholm. Nach dem Zweiten Weltkrieg entwickelte sich das Buch auch im deutschsprachigen Raum zu einem Bestseller.

Property	Value
dbpedia-owl:abstract	<ul style="list-style-type: none"> Wem die Stunde schlägt (englisch <i>For Whom the Bell Tolls</i>) ist ein Roman von Ernest Hemingway erschien 1941 im Verlag Bernann-Fischer, Stockholm. Nach dem Zweiten Weltkrieg entwickelte sich das Buch auch im deutschsprachigen Raum zu einem Bestseller. For Whom the Bell Tolls is a novel by Ernest Hemingway published in 1940. It tells the story of a young American journalist who joins the International Brigades during the Spanish Civil War. As an expert in the use of explosives, he is assigned to blow up a bridge over the Ebro River. Hemingway's greatest works, along with <i>The Sun Also Rises</i>, <i>The Old Man and the Sea</i>, and <i>A Farewell to Arms</i>, are considered some of the finest American literature of the 20th century. Por quién doblan las campanas, en inglés <i>For Whom the Bell Tolls</i>, es una novela publicada en 1940 por Ernest Hemingway. El título procede de un poema de John Donne, y que data de 1624: Nadie es una isla, completo en sí mismo; cada hombre es un pedregal de la tierra, como si fuera un promontorio, o la casa de uno de tus amigos, o la tuya propia; si un pedregal se mueve, afecta a toda la tierra; si una casa se cae, afecta a todos los que viven en ella; si un hombre muere, afecta a todos los que viven en el mundo. Nunca hagas preguntas por quién doblan las campanas: doblan por ti. Kenelle kellot soivat (For Whom the Bell Tolls) on Ernest Hemingwayn vuonna 1940 julkaistu romaani, joka on perustunut John Donnin kirjotuksesta Rukouksia sairastavalle (Devotions upon Emergent Occasions). Kysymään, kenelle kellot soivat, ne soivat sinulle. "Kenelle kellot soivat on Hemingwayn merkitsevä sisällissodan aikaan. Pour qui sonne le glas (For Whom the Bell Tolls) est un roman d'Ernest Hemingway publié en 1940. L'ambiance, ce livre est une ode au peuple espagnol tel qu'a pu le voir Hemingway et montre les conditions de la guerre et l'expérience qu'il a vécue pendant la guerre civile espagnole. Per chi suona la campana è un romanzo dello scrittore statunitense Ernest Hemingway pubblicato nel 1940. Il romanzo è ispirato alla guerra civile spagnola e l'esperienza gli fornì il materiale per il romanzo. 「誰がために鐘は鳴る」(たがためにかねはなる、For Whom the Bell Tolls)は、アーネスト・ヘミングウェイの同名の小説を引用している。1939年3月にこの作品を書き始め、翌40年に発表され、「誰がために鐘は鳴る」と、誰が漢字になっている。1978年には宝塚歌劇団によってミュージカル版が上演された。 Voor wie de klok luidt (oorspronkelijke titel <i>For Whom the Bell Tolls</i>) is een roman uit 1940 geschreven door Ernest Hemingway. Het boek is een ode aan de internationale brigades die als lid van de Internationale Brigades wordt toegevoegd aan een antifascistische groep op Segovia te doen slagen. Jordan wordt tijdens de missie verliefd op een Spaanse vrouw, Hemingway was tijdens de burgeroorlog in Spanje. De hoofdpersoon is mogelijk gebaseerd op een kennis van Hemingway. Belangrijke thema's in het boek zijn de verschrikkingen van de moord, zelfmoordacties. De leden van de guerrillagroep worden geconfronteerd met anonieme vijanden in de bergen. Het einde van het boek voorspelt Hemingways eigen dood. Hemingway schreef het boek tijdens de Tweede Wereldoorlog, werd het vertaald door Sam Wood met Gary Cooper als Robert Jordan (pseudoniem van Arie Nicolaas Jan den Hollander). Uitgever: Agathon - 1977. ISBN 90-234-0100-0. Por Quem os Sinos Dobram é um romance de 1940 do escritor americano Ernest Hemingway. O protagonista é um jovem jornalista que se tornou conhecedor do uso de explosivos, Jordan recebe a missão de liderar uma unidade de guerrilha durante a Guerra Civil Espanhola ao lado das tropas de ambos os lados: a direita auxiliadas pelo governo fascista italiano e nazista alemão e a esquerda apoiada pelo povo espanhol. O livro é um panorama de privilégios rapidamente instaurado no lado da República. Acima de tudo o livro trata do momento a guerra civil, travada entre irmãos. "Quando morre um homem, morremos todos, pois estranhamente desempenhando os papéis bizarros que se viram forçados a assumir durante a guerra. Em 1943 um filme homônimo foi feito, tendo nos papéis principais os astros da época, Humphrey Bogart e Ingrid Bergman. A banda californiana de heavy metal Metallica tem uma canção em seu segundo álbum de estúdio, <i>Master of Puppets</i>, intitulada "For Whom the Bell Tolls". Komu bije dzwon (For Whom the Bell Tolls) - powieść Ernesta Hemingwaya, opublikowana w 1940 roku. Opowiada o wojnie domowej w Hiszpanii, w której bierze udział polski oddział partyzancki walczący po stronie Republikańców podczas Hiszpańskiej wojny domowej. Klockan klämtar för dig (For Whom the Bell Tolls) är en roman av Ernest Hemingway från 1940. Den handlar om en amerikansk journalist som blir utskickad av sin överordnade Goltz för att leda en liten enhet av internationella brigader i spanska inbördeskriget. Han blir utskickad för att leda en liten enhet av internationella brigader i spanska inbördeskriget. Romanens titel kommer från en dikt av engelsmannen John Donne: "... och sänd för den skull en klocka som ska ringa för dig". «По ком звонит колокол» (англ. <i>For Whom the Bell Tolls</i>) — роман Эрнеста Хемингуэй, вышедший в 1940 году. Действие происходит в Испании во время Гражданской войны. Герой — американский журналист, отправленный в тыл франкистов, к партизанам, во время Гражданской войны. Он должен предотвратить подход франкистских подразделений при атаке на Сеговию. Хемингуэй рас

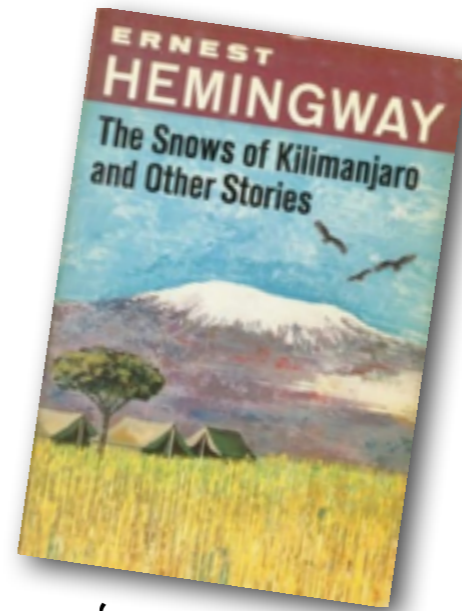
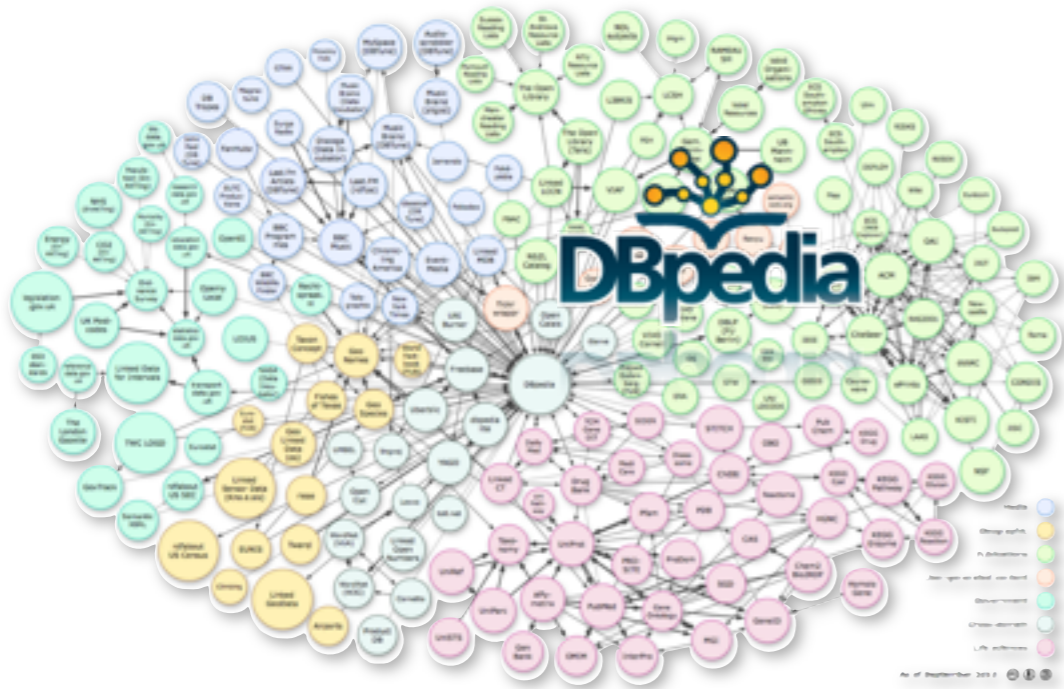
dbpedia:For_Whom_the_Bell_Tolls



Wie soll das semantische Netzwerk um [dbpedia:For_Whom_the_Bell_Tolls](#) herum durchsucht werden?

http://dbpedia.org/page/For_Whom_the_Bell_Tolls

Explorative Suche



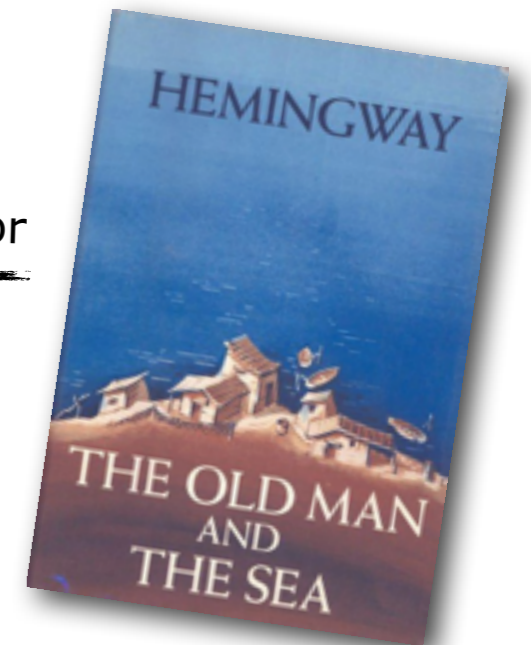
dbpedia-owl:author

dbpedia-owl:author



dbpedia-owl:author

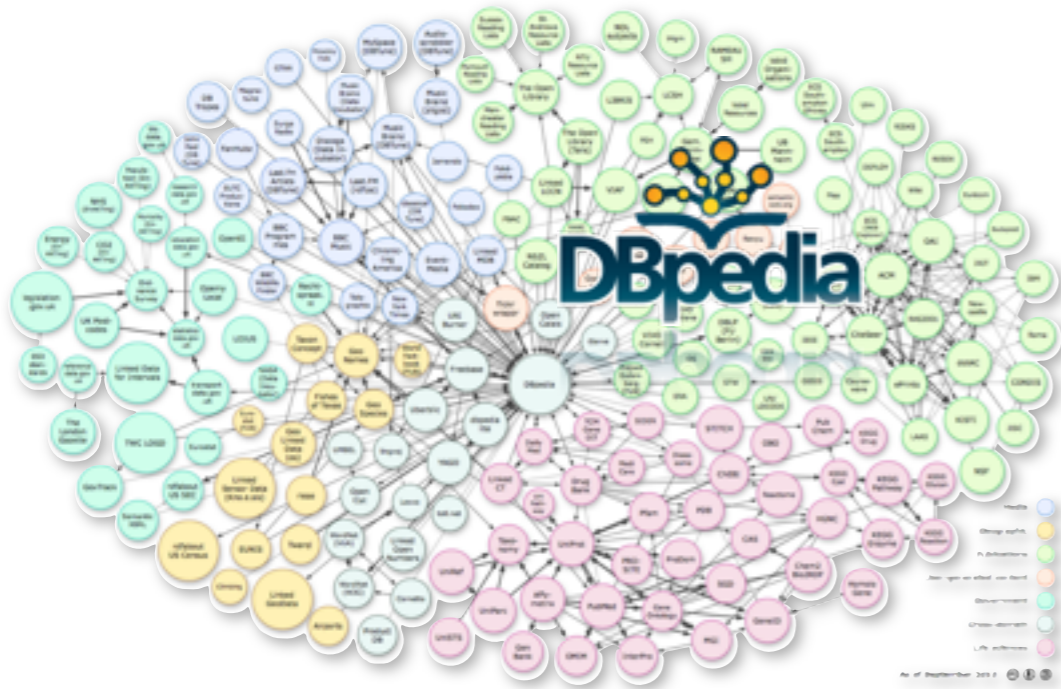
dbpedia-owl:author



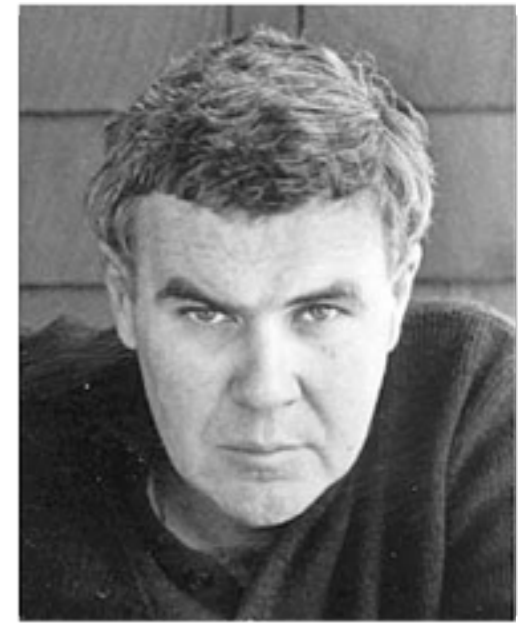
dbpedia:For_Whom_the_Bell_Tolls

dbpedia:Ernest_Hemingway

Explorative Suche



dbpedia:Jack_Kerouac



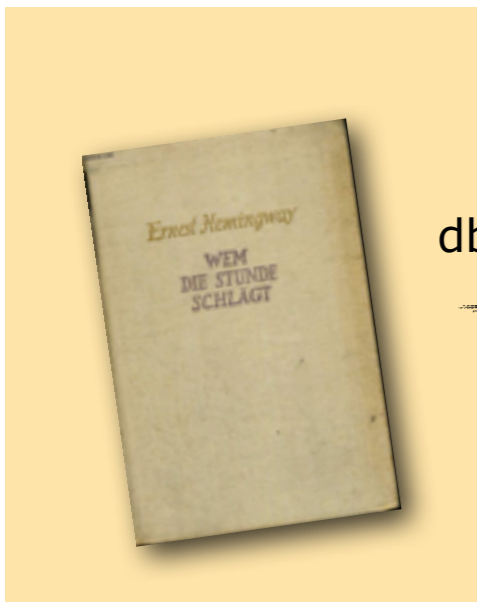
dbpedia:Raymond_Carver

dbpedia-owl:influenced_by

dbpedia-owl:influenced_by

dbpedia-owl:influenced_b

dbpedia-owl:author



dbpedia:For_Whom_the_Bell_Tolls

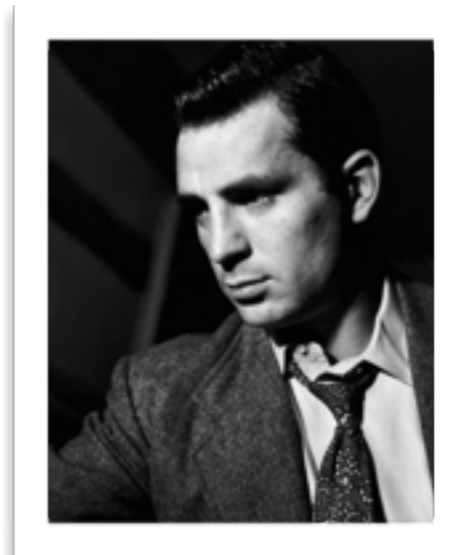
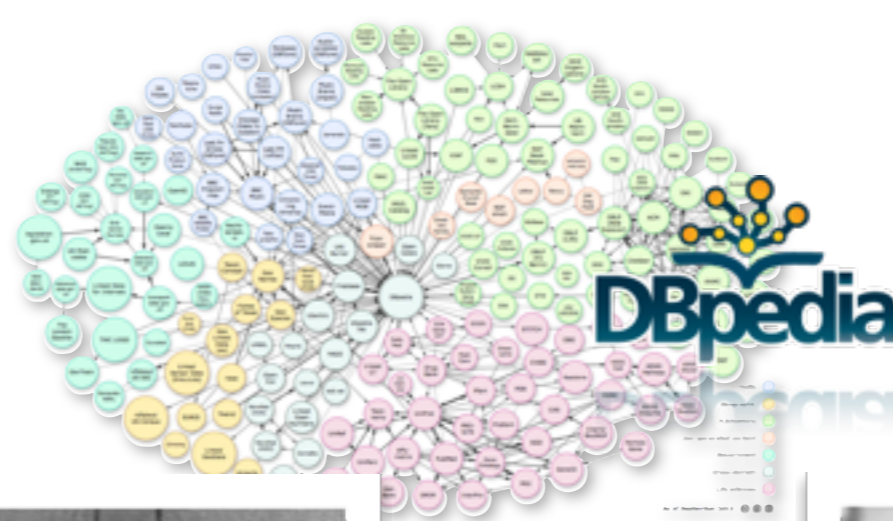


dbpedia:Ernest_Hemingway



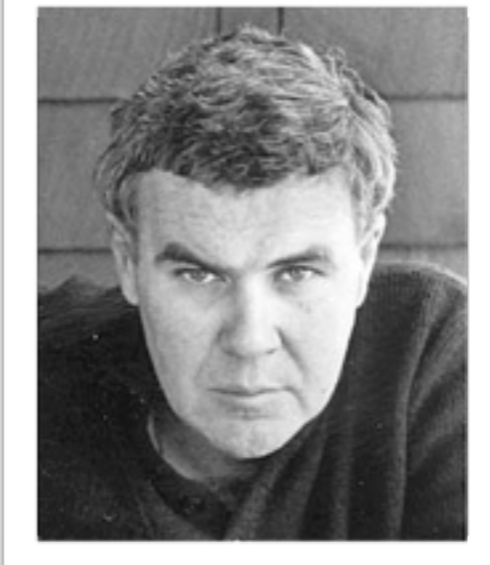
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Explorative Suche



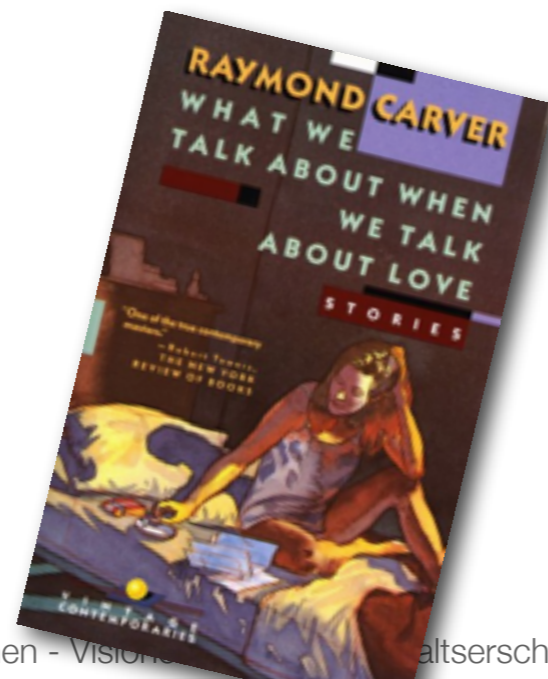
dbpedia:Jack_Kerouac

dbpedia-owl:notableWork



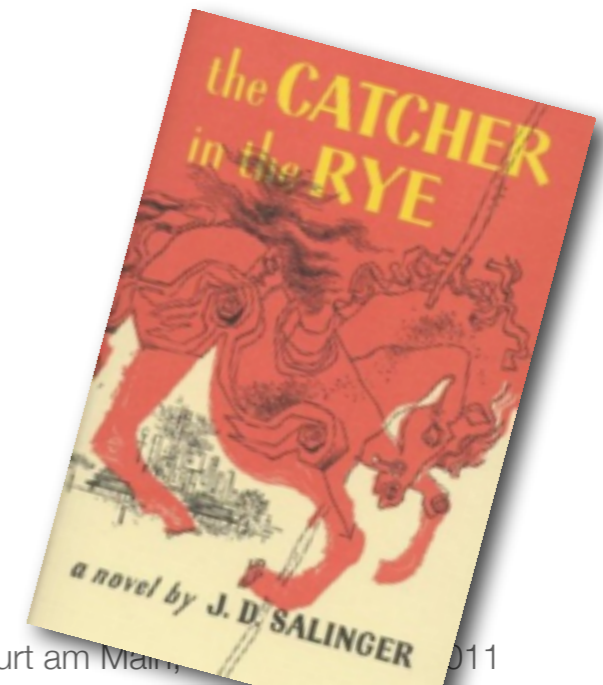
dbpedia:Raymond_Carver

dbpedia-owl:notableWork



dbpedia:Jerome_D._Salinger

dbpedia-owl:notableWork



...Und wie sieht eine
explorative Videosuche
aus?

Exploratory Search [expand]

President of the United States

related place

- United States (64)
- White House (13)
- Northern Mariana Islands (1)
- Guam (5)

is also related to

- Arnold Schwarzenegger (10)
- Gerald Ford (5)
- Harry S. Truman (1)
- Barack Obama (7)
- Abraham Lincoln (2)
- Bill Clinton (2)
- George H. W. Bush (1)
- Franklin D. Roosevelt (89)
- George W. Bush (2)
- Hawaii (24)
- Al Gore (6)
- Illinois (2553)

American president

is also related to

- President of the United States (6)



Search Results

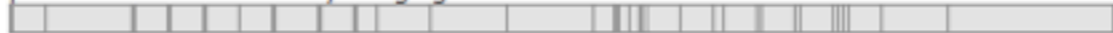
Search time: 126ms | Results found: 222
Sort results: relevant | popular | recent



The American Presidency at War: The Imperial Presidency and the Founding

Prof. Dr. Daniel A. Farber
UC Berkeley Events Business
Berkeley - University of California

This conference seeks to examine these critical questions in an expansive way, drawing together scholars from a number of different subfields in political science as well By bringing to...



Duration: 00:56:45



The American Presidency at War: Rethinking Presidential Power in the 21st Century

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The American Presidency at War: War and Terrorism in the 2008 Elections

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Duration: 01:25:50

Facets

Type

- Video (216)
- Lecture (5)
- Speaker (1)

Category

- Others - (56)
- Literature (26)
- Political Science (25)
- Computer Science (23)

Organization

- Berkeley - University of California (80)
- Massachusetts Institute of Technology (21)
- Yovisto Users (14)
- Friedrich-Schiller-Universität Jena (13)

Language

- en (133)
- de (82)
- (4)
- es (2)

Popular Tags

- president (6)
- roosevelt (4)
- footage (3)
- space (3)

Hasso Plattner Institut

J. Waitelonis, H. Sack, Z. Kramer, J. Hercher: *Semantically Enabled Exploratory Video Search*, in Proc. of Semantic Search Workshop (SemSearch10) at the 19th Int. World Wide Web Conference (WWW2010), 26-30 April 2010, Raleigh, NC, USA, 2010.

American president

Search

VIDEO INFO

SPEAKER

LECTURE

UNIVERSITY

Exploratory Search [\[expand\]](#)

President of the United States

related place

- [United States \(64\)](#)
- [White House \(13\)](#)
- [Northern Mariana Islands \(1\)](#)
- [Guam \(5\)](#)

is also related to

- [Arnold Schwarzenegger \(10\)](#)
- [Gerald Ford \(5\)](#)
- [Harry S. Truman \(1\)](#)
- [Barack Obama \(7\)](#)
- [Abraham Lincoln \(2\)](#)
- [Bill Clinton \(2\)](#)
- [George H. W. Bush \(1\)](#)
- [Franklin D. Roosevelt \(89\)](#)
- [George W. Bush \(2\)](#)
- [Hawaii \(24\)](#)
- [Al Gore \(6\)](#)
- [Illinois \(2553\)](#)

American president

is also related to

- [President of the United States \(6\)](#)



Search Results

Search time: 126ms | Results found: 222

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- [Video \(216\)](#)
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- [Speaker \(1\)](#)

Category

- [- Others - \(56\)](#)
- [Literature \(26\)](#)
- [Political Science \(25\)](#)
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Organization

- [Berkeley - University of California \(80\)](#)
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Language

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- [es \(2\)](#)

Popular Tags

- [president \(6\)](#)
- [roosevelt \(4\)](#)
- [footage \(3\)](#)
- [space \(3\)](#)

J. Waitelonis, H. Sack, Z. Kramer, J. Hercher: *Semantically Enabled Exploratory Video Search*, in Proc. of Semantic Search Workshop (SemSearch10) at the 19th Int. World Wide Web Conference (WWW2010), 26-30 April 2010, Raleigh, NC, USA, 2010.

Exploratory Search [\[expand\]](#)

Barack Obama

related place

[United States Virgin Islands](#) (2)
[Northern Mariana Islands](#) (1)

nationality

[United States](#) (64)

occupation

[Constitutional law](#) (4)
[Community organizing](#) (346)
[Author](#) (307)
[Professor](#) (4611)
[Lawyer](#) (24)

state

[Illinois](#) (2553)

birth place

[Hawaii](#) (24)

order

[List of Presidents of the United States](#)
 (5)

religion

[Associated Press](#) (128)
[Christianity](#) (63)

footnotes

[Presidency of Barack Obama](#) (16)
[Family of Barack Obama](#) (32)

vicepresident

[Joe Biden](#) (121)

alma mater

[Columbia University](#) (93)
[Harvard Law School](#) (2)

predecessor

[George W. Bush](#) (2)

alma mater

[Bachelor of Arts](#) (233)
[Juris Doctor](#) (12)

residence

[White House](#) (12)

**Search Results**

Search time: 354ms | Results found: 7
 Sort results: [relevant](#) | [popular](#) | [recent](#)

**Microblogging: Leben in 140 Zeichen**

Mario Sixtus

[Elektrischer Reporter](#)

[Elektrischer Reporter](#)

Barack Obama tut es, Mitarbeiter der NASA tun es, ebenso wie SPD-Generalsekretär Hubertus Heil und drei Millionen weitere: Sie alle

nutzen den Microblogging-Dienst Twitter, um ...



Duration: 00:09:56

**Annual Review of the Presidency: A New President Takes Office**

Theda Skocpol

[UC Berkeley Events](#)

[Berkeley - University of California](#)

The Robert T. Matsui Center for Politics and Public Service at the Institute of Governmental Studies, in conjunction with the UC Berkeley

Extension, is proud to present the 28th in a serie...



Duration: 01:36:27

**Cornell 2009 Senior Class Convocation**

David Plouffe

[Cornell - Current Video](#)

[Cornell University Ithaca](#)

Cornell - Current Video - Cornell 2009 Senior Class Convocation - May 23, 2009. cornell usa politics education - Author: David Plouffe, chief campaign manager for Barack Obama



Duration: 00:45:47

**Robert T. Matsui Center for Politics and Public Service: Matsui**

Lecturer Congressman Leach

James A. Leach

[UC Berkeley Events Society](#)

[Berkeley - University of California](#)

After 30 years as a Republican Congressman from Iowa, Representative Leach broke party ranks and endorsed Democrat Barack Obama for the presidency. Now this moderate Republican ...



Duration: 01:23:16

Facets**Type**

[Video](#) (7)

Category

[- Others -](#) (3)
[Computer Science](#) (2)
[Political Science](#) (2)

Organization

[Berkeley - University of California](#) (3)
[Cornell University Ithaca](#) (1)
[TED - Technology, Entertainment, Design](#) (1)
[Hasso Plattner Institut](#) (1)

Language

[en](#) (4)
[de](#) (3)

Popular Tags

[open](#) (2)
[1877](#) (1)
[1989](#) (1)
[alchemie](#) (1)

Hasso Plattner Institut

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Exploratory Search [\[expand\]](#)

List of Presidents of the United States

is also related to

- [Woodrow Wilson \(1\)](#)
- [Bill Clinton \(2\)](#)
- [Franklin D. Roosevelt \(89\)](#)
- [John F. Kennedy \(12\)](#)
- [George W. Bush \(2\)](#)
- [Thomas Jefferson \(6\)](#)
- [Ronald Reagan \(9\)](#)
- [Gerald Ford \(5\)](#)
- [President of the United States \(6\)](#)
- [Harry S. Truman \(1\)](#)
- [Lyndon B. Johnson \(8\)](#)
- [Abraham Lincoln \(2\)](#)
- [Barack Obama \(7\)](#)
- [Presidency of George W. Bush \(117\)](#)
- [George H. W. Bush \(1\)](#)
- [Presidency of Barack Obama \(16\)](#)
- [Theodore Roosevelt \(9\)](#)
- [Richard Nixon \(11\)](#)



Search Results

Search time: 189ms | Results found: 5
Sort results: relevant | popular | recent

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Duration: 00:56:45



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Prof. Dr. Jack Citrin
UC Berkeley Events Business
Berkeley - University of California

This conference seeks to examine these critical questions in an expansive way, drawing together scholars from a number of different subfields in political science as well By bringing to...

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The American Presidency at War: War and Terrorism in the 2008 Elections

Prof. Dr. Adam Berinsky
UC Berkeley Events Business
Berkeley - University of California

This conference seeks to examine these critical questions in an expansive way, drawing together scholars from a number of different subfields in political science as well By bringing to...

Duration: 00:29:27



The American Presidency at War: War and Presidential Politics

Prof. Dr. Matthew Baum
UC Berkeley Events Business
Berkeley - University of California

This conference seeks to examine these critical questions in an expansive way, drawing together scholars from a number of different subfields in political science as well By bringing to...

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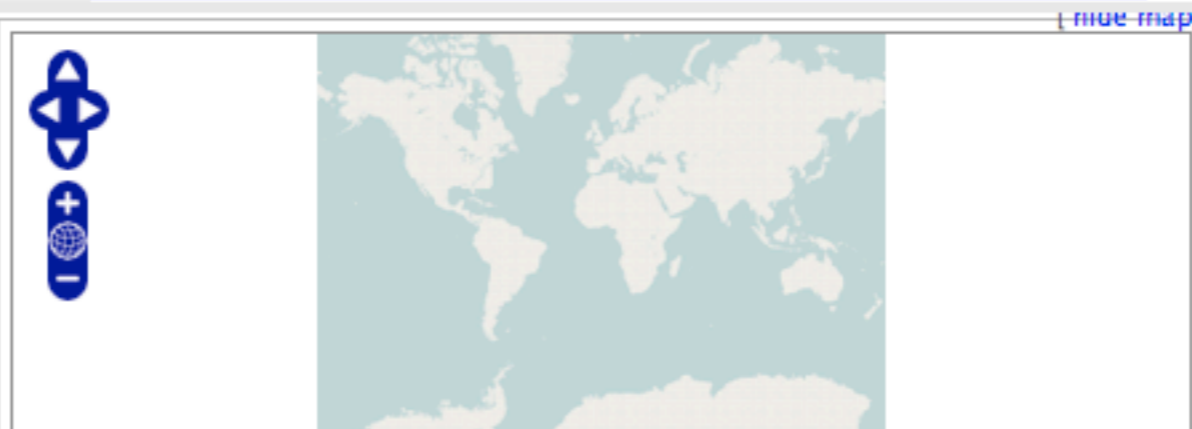
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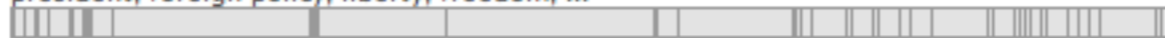
Troubled Transformations: Fostering Democracy and Development in a Quickly Changing World

Larry Diamond

[Stanford Alumni Association - Tracks](#)

[Stanford University](#)

World, international relations theory, rule of law, democratic movement, economic development, United States of America, US, George W. Bush, president, foreign policy, liberty, freedom, ...



Duration: 01:55:05



Wissensrepräsentation 3 / 3

Dr. Harald Sack

[Semantic Web](#)

[Friedrich-Schiller-Universität Jena](#)



Duration: 01:29:08

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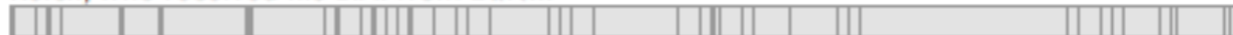
Berkeley Writers at Work – Robert Reich

Prof. Dr. Robert Reich

[UC Berkeley Events Humanities](#)

[Berkeley – University of California](#)

Professor Robert Reich, Goldman School of Public Policy October 14, 2008 12:00–1:30 p.m. Morrison Library in 101 Doe Library Professor Reich, who received his B.A. from Dart...



Duration: 01:27:27



The Richard & Rhoda Goldman School of Public Policy: US Supreme Court Justice Stephen Breyer: A Stephen Breyer

Stephen Breyer

[UC Berkeley Events Social Science](#)

[Berkeley – University of California](#)

A presentation by US Supreme Court Justice Stephen Breyer, followed by a conversation with Dean Christopher Edley, UC Berkeley School of Law. Stephen Breyer, born in San Franci...



Duration: 01:01:41



How the Net aids dictatorships

Evgeny Morozov

[TED Conference – Technology, Entertainment, Desig...](#)

[TED – Technology, Entertainment, Design](#)

TED Fellow and journalist Evgeny Morozov punctures what he calls "iPod liberalism" -- the assumption that tech innovation always promotes freedom, democracy -- with chi...



Duration: 00:11:50

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[TED – Technology, Entertainment, Design](#) (1)

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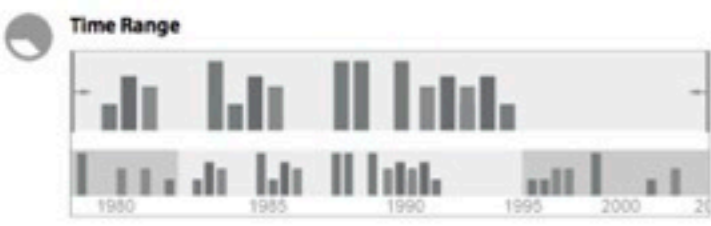
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Organisations (12)

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SED 32
Ipsum 13
Lorem Ipsum 11

Things (344)


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Ipsum 13
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DDR Magazin
1-13-1970 - 1-1970




DDR Walter Ulbricht
Berliner Mauer Mauerfall SED

40 Jahrestag der DDR




DDR Walter Ulbricht
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Sammelband 2 - 1996-09




DDR Walter Ulbricht
Berliner Mauer Mauerfall SED

DDR Magazin
Sammelband 2 - 1996-10




DDR Walter Ulbricht
Berliner Mauer Mauerfall SED

149 Tage nach der Revolution




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Berliner Mauer Mauerfall SED

Rede von E. Kreuz




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We Shall Overcome




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Berliner Mauer Mauerfall SED

DDR Lebensmittel 1




DDR Walter Ulbricht
Berliner Mauer Mauerfall SED

DDR Lebensmittel 2




DDR Walter Ulbricht
Berliner Mauer Mauerfall SED

Mauerabbriss
Waldemarstrasse (Teil 1/2)



DDR Walter Ulbricht
Berliner Mauer Mauerfall SED

Interview mit
Politbüromitglied
Werner Eberlein



DDR Walter Ulbricht
Berliner Mauer Mauerfall SED

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joerg.waitelonis@hpi.uni-potsdam.de

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Ihre Aufmerksamkeit!

The logo for THESEUS is a blue circular graphic with a stylized 'S' shape inside, followed by the word 'THESEUS' in a bold, blue font.