

Visualisation d'informations patrimoniales spatialisées.

Retours d'expériences sur le centre historique de Cracovie

I. Dudek et J.Y. Blaise

FRE 3315 (UMR 694 MAP CNRS/MCC), Marseille



[XX, *Cracov, north-western view*, 1581 [in] E.M. Firlet, *Najstarsza panorama Krakowa*, Kraków 1998]

Introduction

Objectives

Méthode

Notions de base

Description du terrain d'expérimentation

Présentation des expériences

évolution de la structure urbaine

évolution du bâti de la place centrale

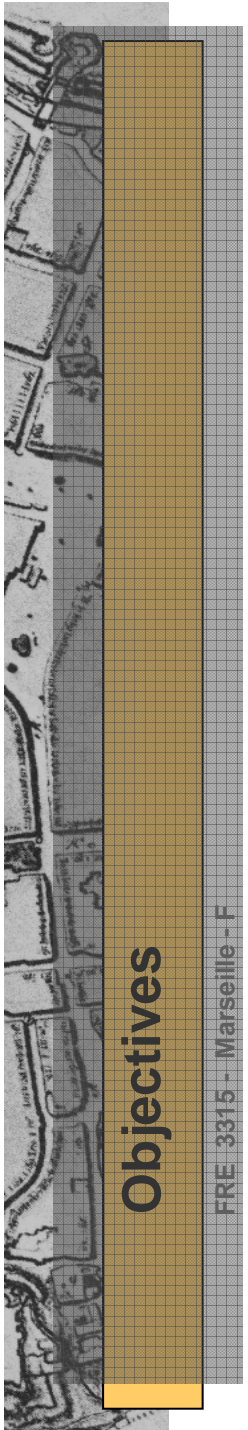
évolution d'édifices majeurs

analyse d'éléments canoniques

Implémentation

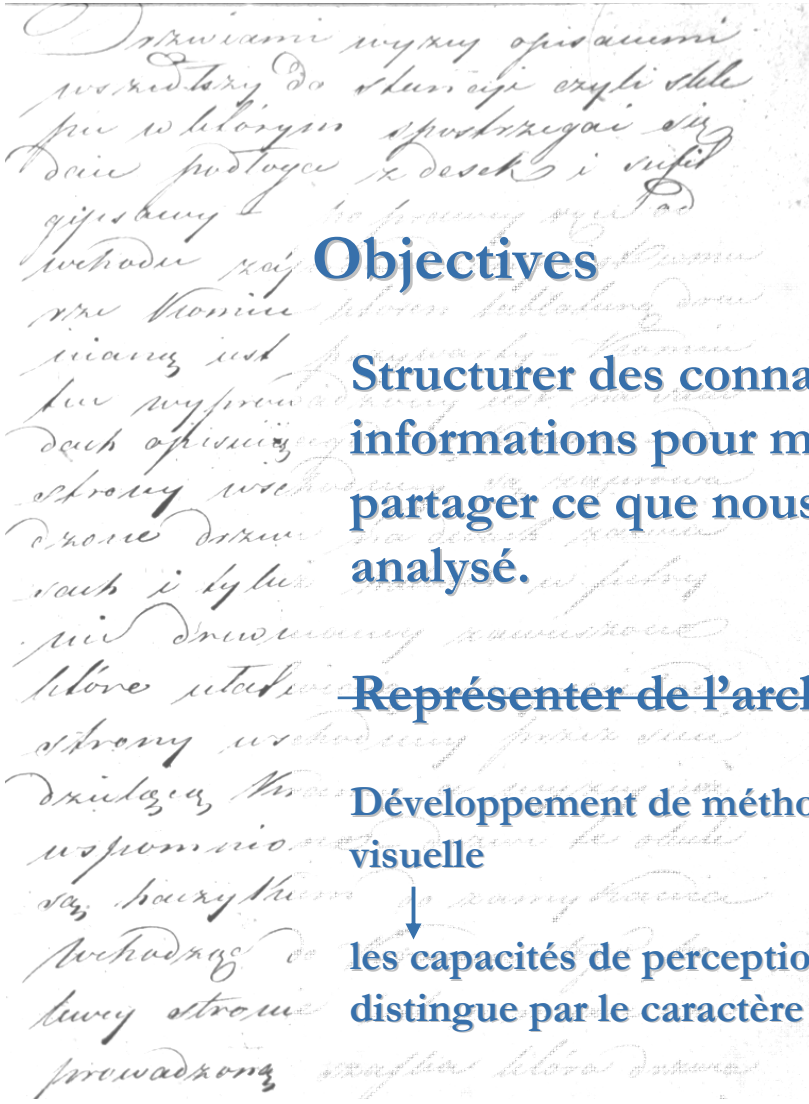
Enseignements





Objectives

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Objectives

Structurer des connaissances et visualiser des informations pour mieux comprendre et mieux partager ce que nous comprenons sur le lieu analysé.

~~Représenter de l'architecture~~

Développement de méthodes et techniques d'analyse visuelle

les capacités de perception visuelle de l'homme, et se distingue par le caractère abstrait des informations à délivrer



* E.R Tufte, *Visual Explanations*, Graphics Press, Cheshire 1997

** J. Bertin, *Sémiologie graphique*, EHESS (1967) 1998

*** R. Spence, *Information visualisation*, Addison Wesley ACM Press 2001

Méthode

La démarche que nous développons se situe à l'intersection de problématiques de :

modélisation architecturale

visualisation d'informations

stratification of information*

graphic variables- efficiency and readability of graphics **

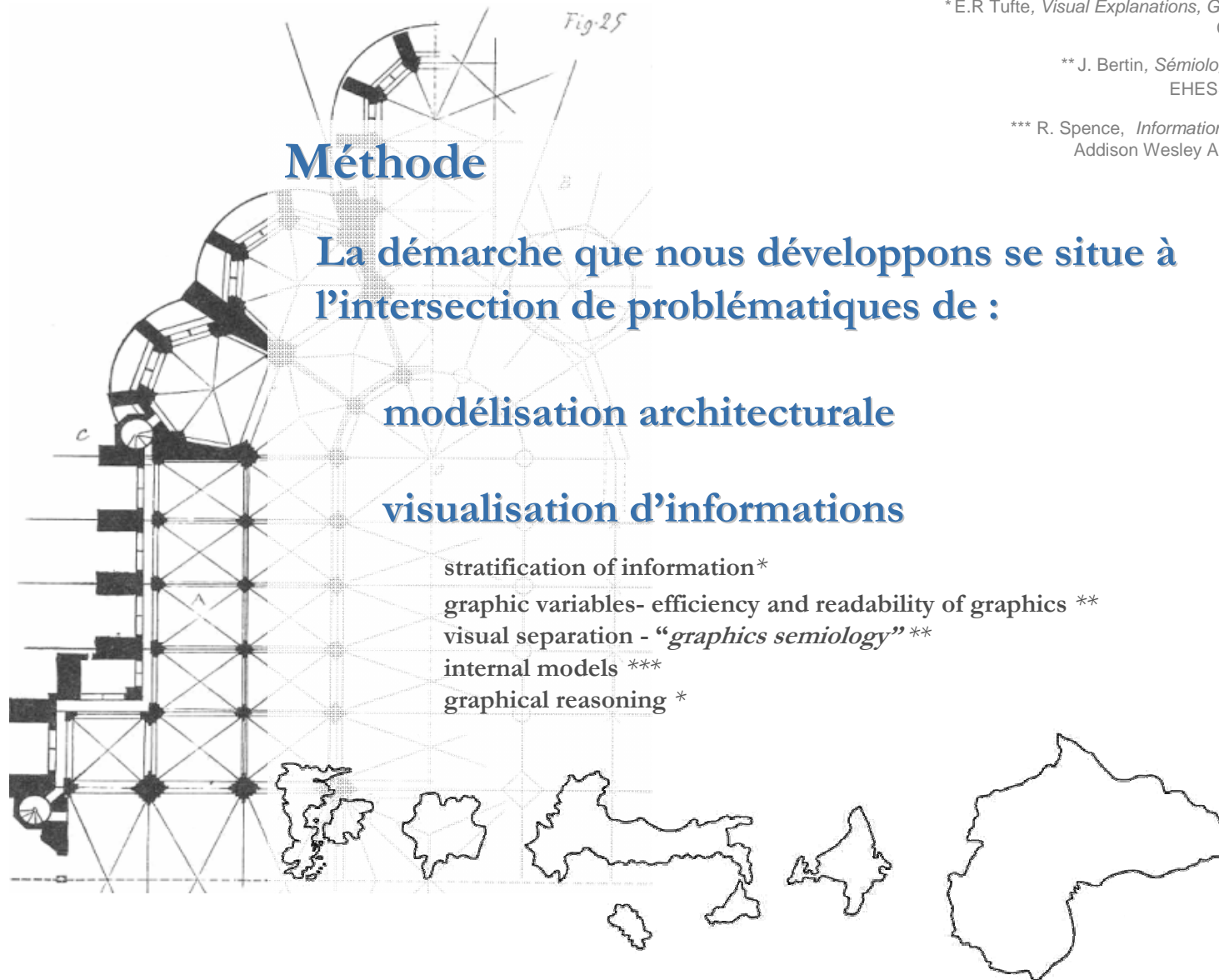
visual separation - "*graphics semiology*" **

internal models ***

graphical reasoning *

Méthode

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E. Viollet Le Duc, *Histoire d'un hôtel de ville*, Mardaga, p.122

R. Spence, *Information visualisation*, 2001

Description du terrain d'expérimentation

Le plan du centre historique de la ville est le résultat de l'extension et de l'évolution de différentes structures urbaines:

- La colline de Wawel
- Le quartier nommé Okół
- La ville médiévale fondée en 1257

place centrale (± 200m x 200m)

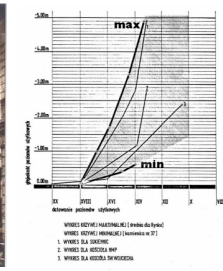
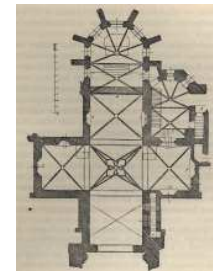
trame de rues et d'îlots

Terrain d'expérimentation

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Description du terrain d'expérimentation

un fort intérêt porté sur le patrimoine architectural,
beaucoup d'études, de textes et de plans rassemblés,
documentation riche et hétérogène du tissu urbain
et du bâti,
forme architecturale et urbaine riche et diverse,
complexité des stratifications historiques.



Terrain d'expérimentation

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Nos terrains d'interventions granularité d'analyse

évolution de la structure urbaine

- l'étude de l'évolution de la ville (VIA)
- maquette comme interface des sources documentaires (VIA ,SOL2)
- visualisation du contenu architectural des sources (SOL2, VIA)
- visualisation de chronologies (SOL2, VIA)
- localisation des sources - visualisation de la position estimée (SOL2, VIA)

évolution du bâti de la place centrale

évolution d'édifices majeurs

analyse d'éléments canoniques

Nos terrains d'interventions granularité d'analyse

évolution de la structure urbaine

évolution du bâti de la place centrale

Sources On Line - catalogue bibliographique, iconographique et cartographique (SOL),

Visualisation comparative de chronologies (chronographe),
Tactichronie,

évolution d'édifices majeurs

analyse d'éléments canoniques



Nos terrains d'interventions granularité d'analyse

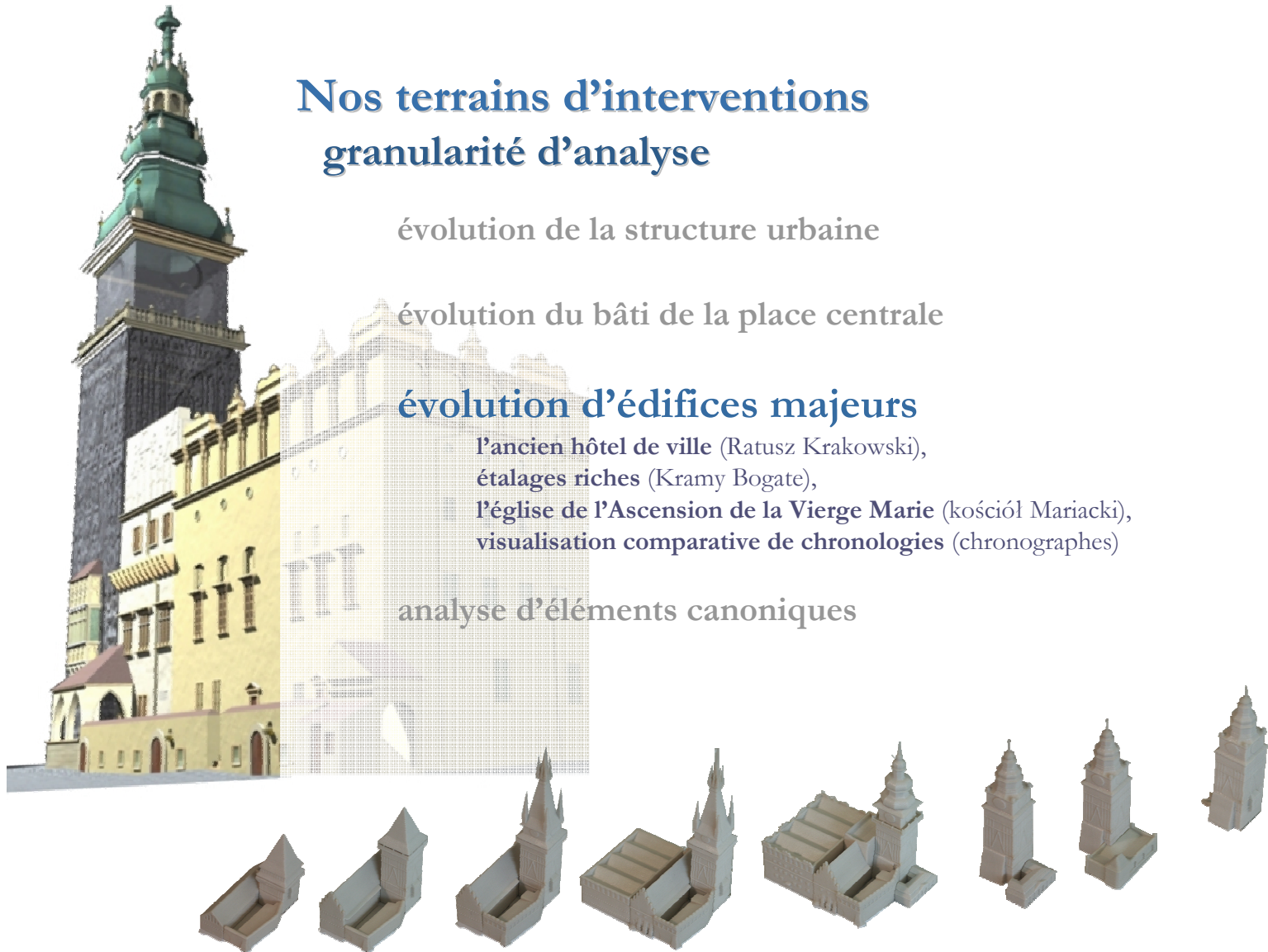
évolution de la structure urbaine

évolution du bâti de la place centrale

évolution d'édifices majeurs

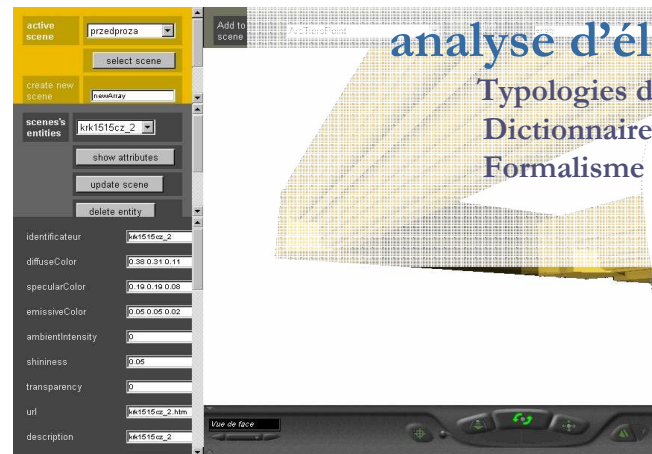
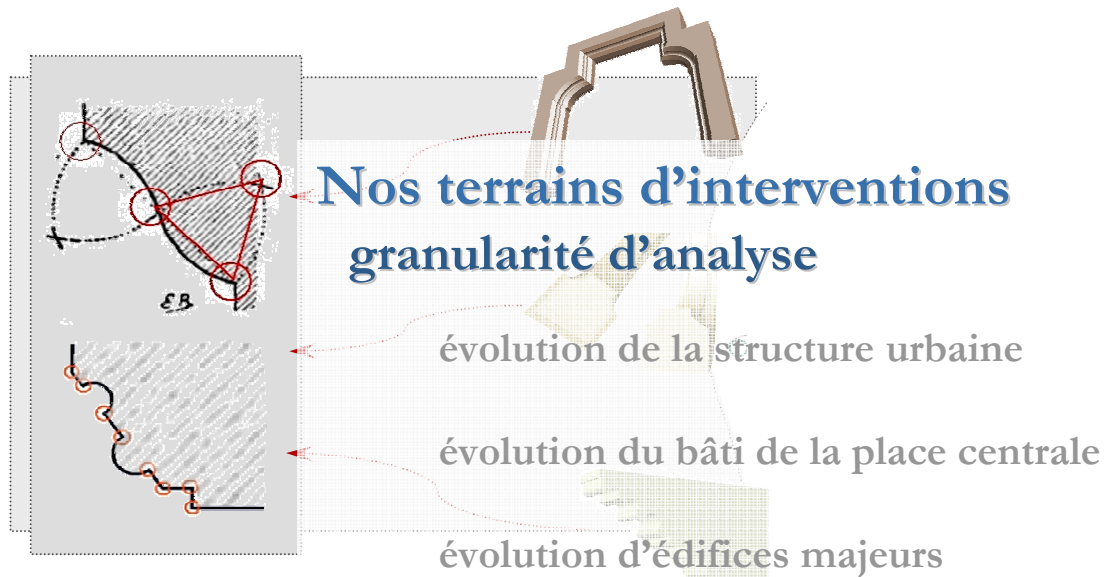
l'ancien hôtel de ville (Ratusz Krakowski),
étalages riches (Kramy Bogate),
l'église de l'Ascension de la Vierge Marie (kościół Mariacki),
visualisation comparative de chronologies (chronographes)

analyse d'éléments canoniques



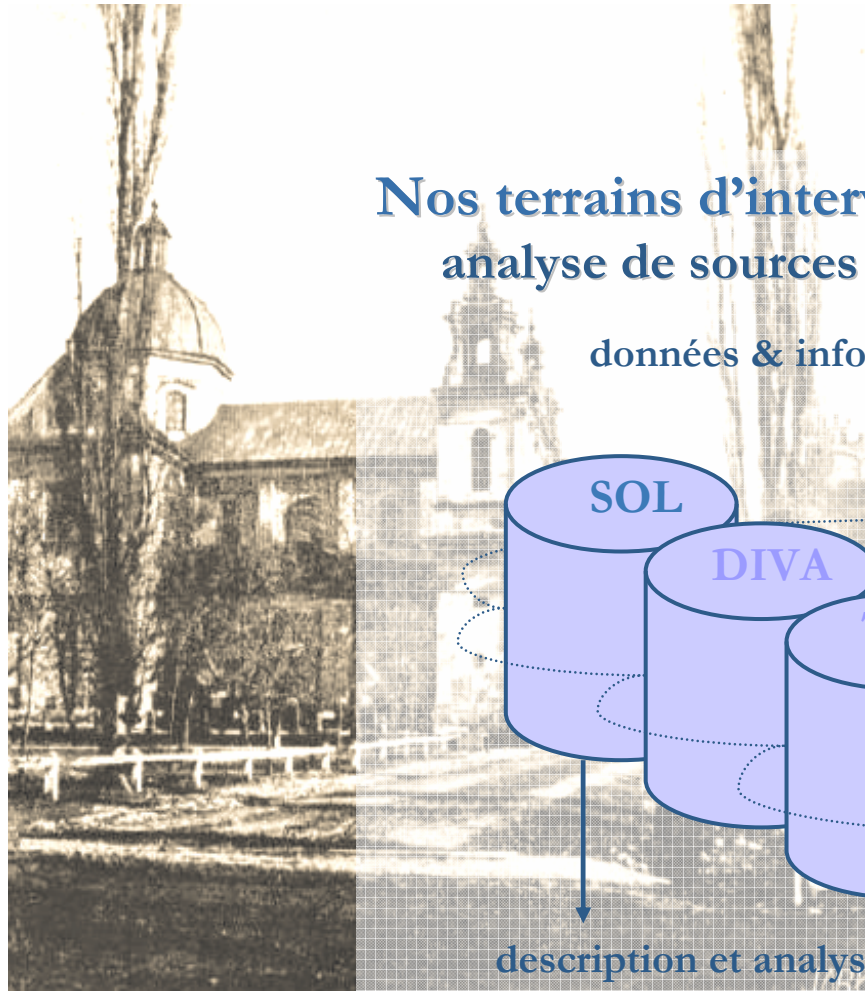
Terrain d'expérimentation

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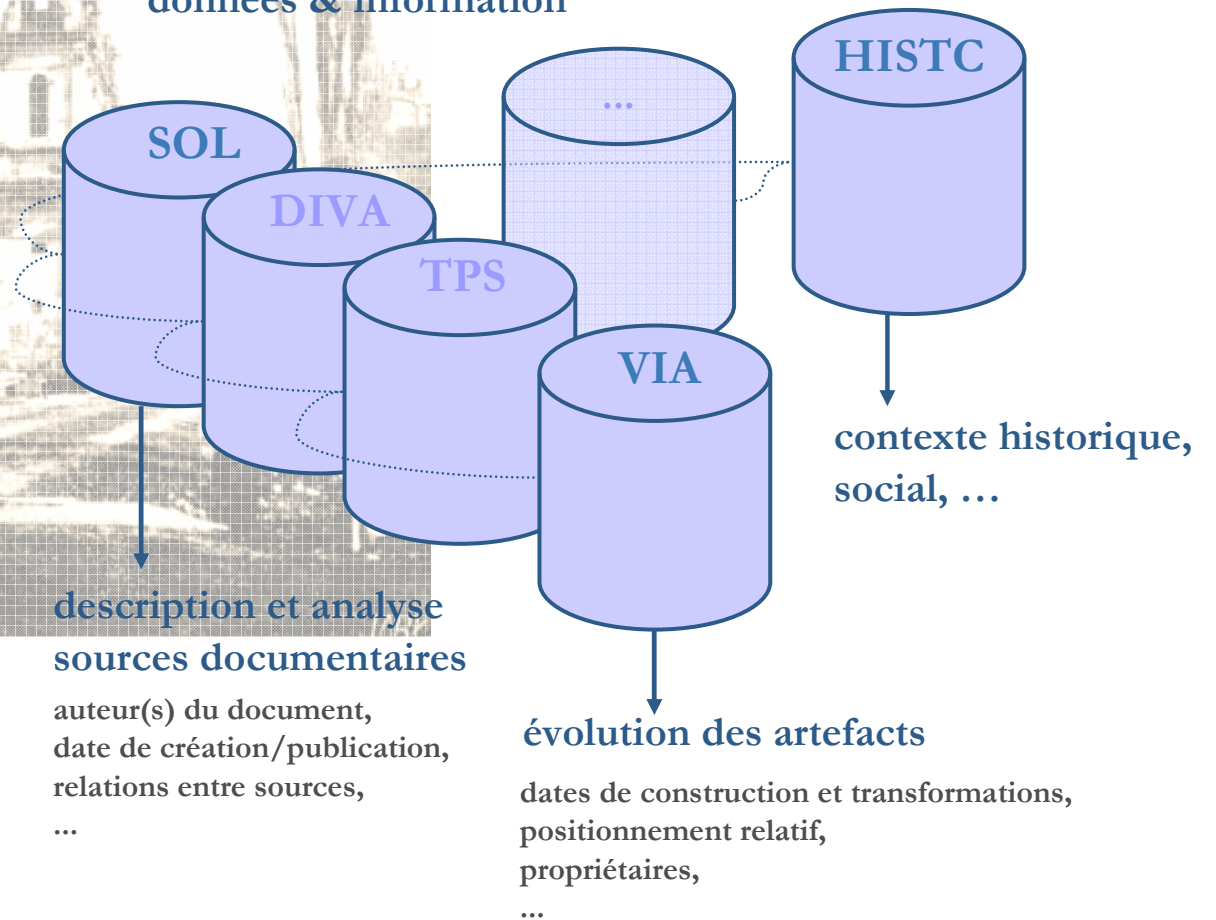
Terrains d'interventions

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Nos terrains d'interventions analyse de sources documentaires

données & information



Terrains d'interventions

99 answers

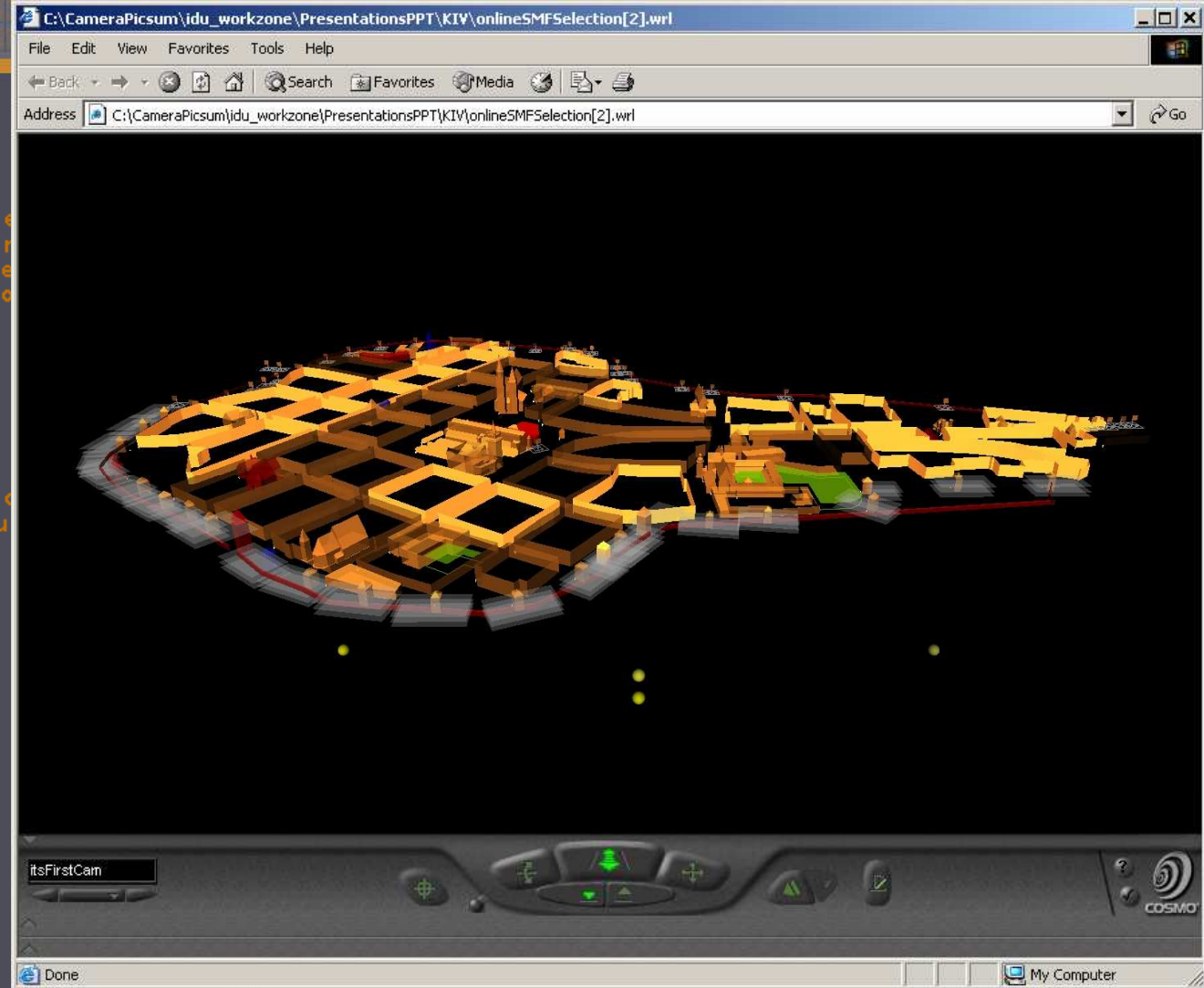
New analysis scene

New SMF typology indicators

New one-period timeline

New analysis map

Visualise justifiers



(1499-1550) 237_592 blok 20

(1257-1257) 238_552 blok 21

(1257-1257) 239_553 blok 11

(1257-1257) 240_554 blok 10

Terrains d'interventions

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89 answers

open legend in new window

New analysis scene

New SMF typology indicators

New one-period timeline

New analysis map

add capture

Visualise justifiers



Terrains d'interventions

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SOL Documentation sheet for evolution of object 202 - Microsoft Internet E...

VIA DB data for object 202_483 - Microsoft Internet Explorer

documents regarding object 202_483 in chronological order of publication

choose ">" sign to open

Ref 1955	1232-1883				
Ref 1433	1237-1890				
Ref 1449	1237-1971				
Ref 1999	1237-2000				
Ref 2003	1237-1972	K			
Ref 2004	1237-1953	D	F	v	
Ref 1428	1241-1895	F	z	v	
Ref 1998	1500-1699	I			
Ref 2010	1563-1800	I			

202_483 kościół Franciszkanów

kościół św. Franciszka z Asyżu Enyklopedia Krakowa - ss. 469 under redaction Dariusz Kalsiewicz

kościół O.O.Franciszkanów Konwentualnych Enyklopedia Krakowa - ss. 469-470 under redaction of - Dariusz Kalsiewicz

Construction Dzieje kościoła O.O. Franciszkanów w Krakowie w wiekach średnich - ss.28-88 author/creator - Kazimierz Rosenbaiger

Destruction Still visible

15 evolutions

kościół Franciszkanów - evolution 202_354

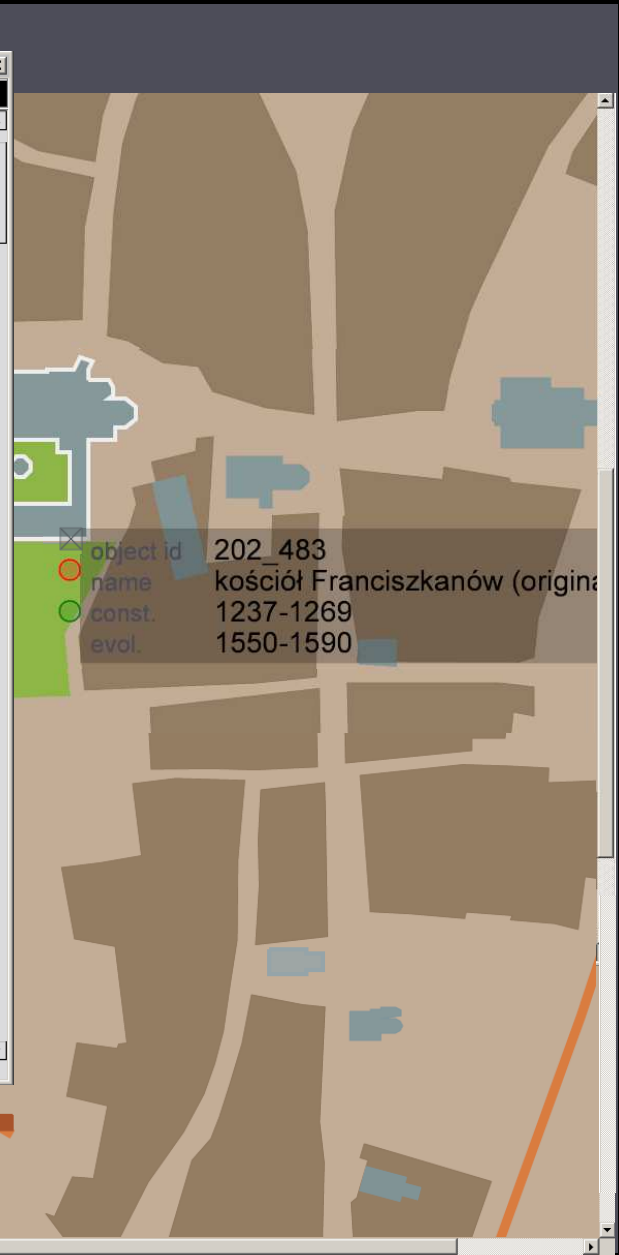
budowa pierwszego kościoła na planie krzyża greckiego z wieżą na skrzyżowaniu, Pos: 392.00,-117.00,-6.00 Bearing: 0.0000 Dzieje kościoła O.O. Franciszkanów w Krakowie w wiekach średnich - ss.28-86 author/creator - Kazimierz Rosenbaiger

Categories:
ocomponent: religious

Shape:
style: Gothic, plane: multi-sided figure, plane: Greek cross, orientation: oriented, characteristic features: towers, characteristic features: transept

Material and typology:
material type: brick, type of structure: one nave

Function:
function: place of worship, role: monastery-related, religious affiliation: roman-catholic, owner: religious congregation



Terrains d'interventions

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89 answers

New analysis scene

open legend in new window

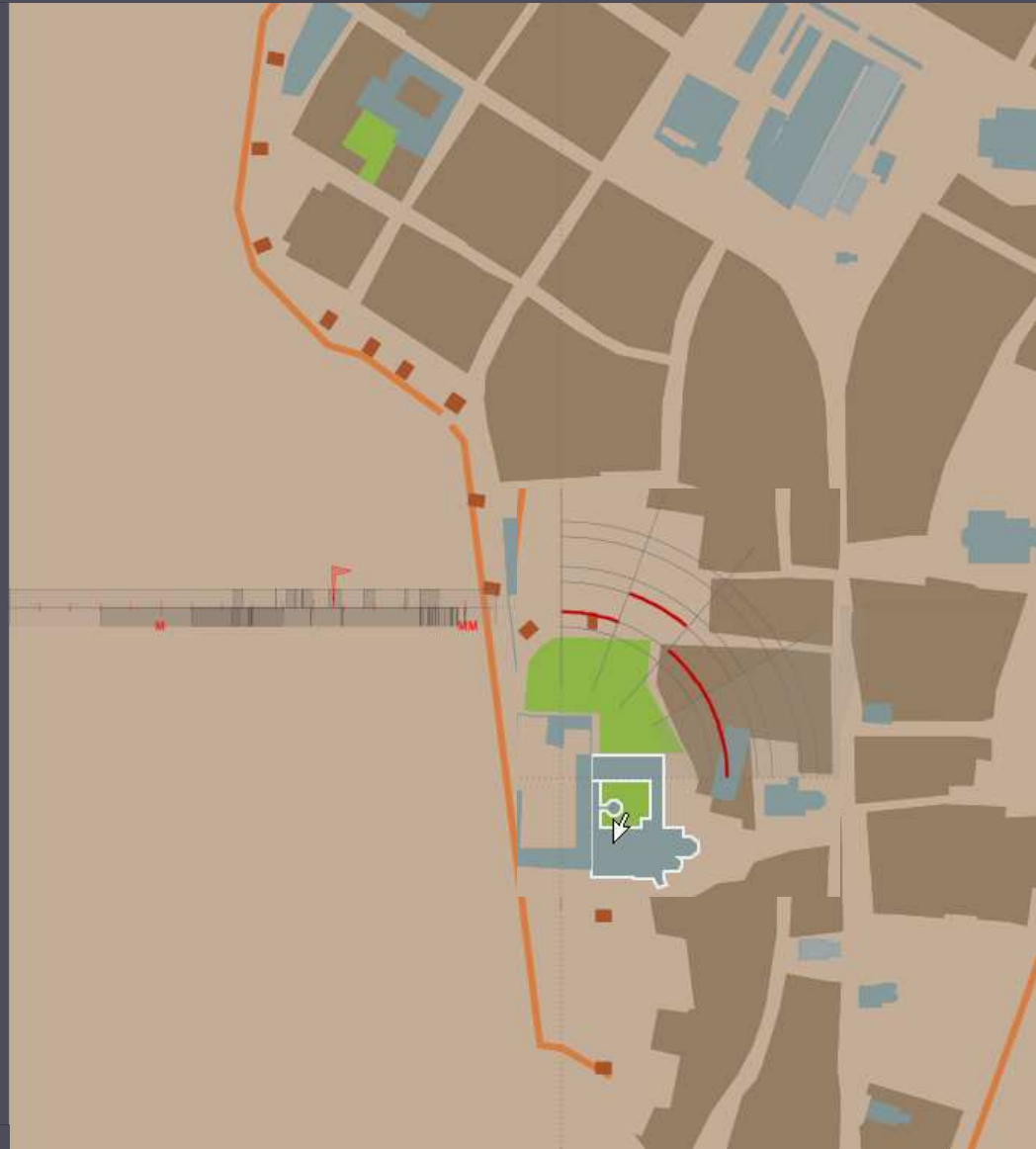
New SMF typology indicators

New one-period timeline

New analysis map

add capture

Visualise justifiers

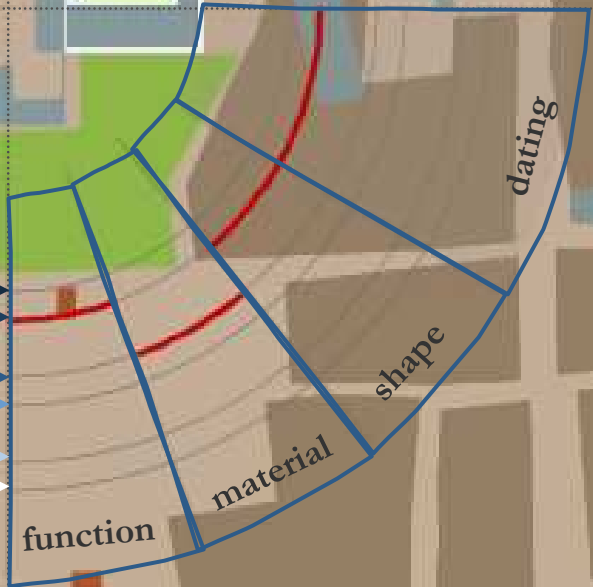


Terrains d'interventions

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Visual tools decipher historic documentation
case studies
information credibility level - justifiers
6-level lexical scale

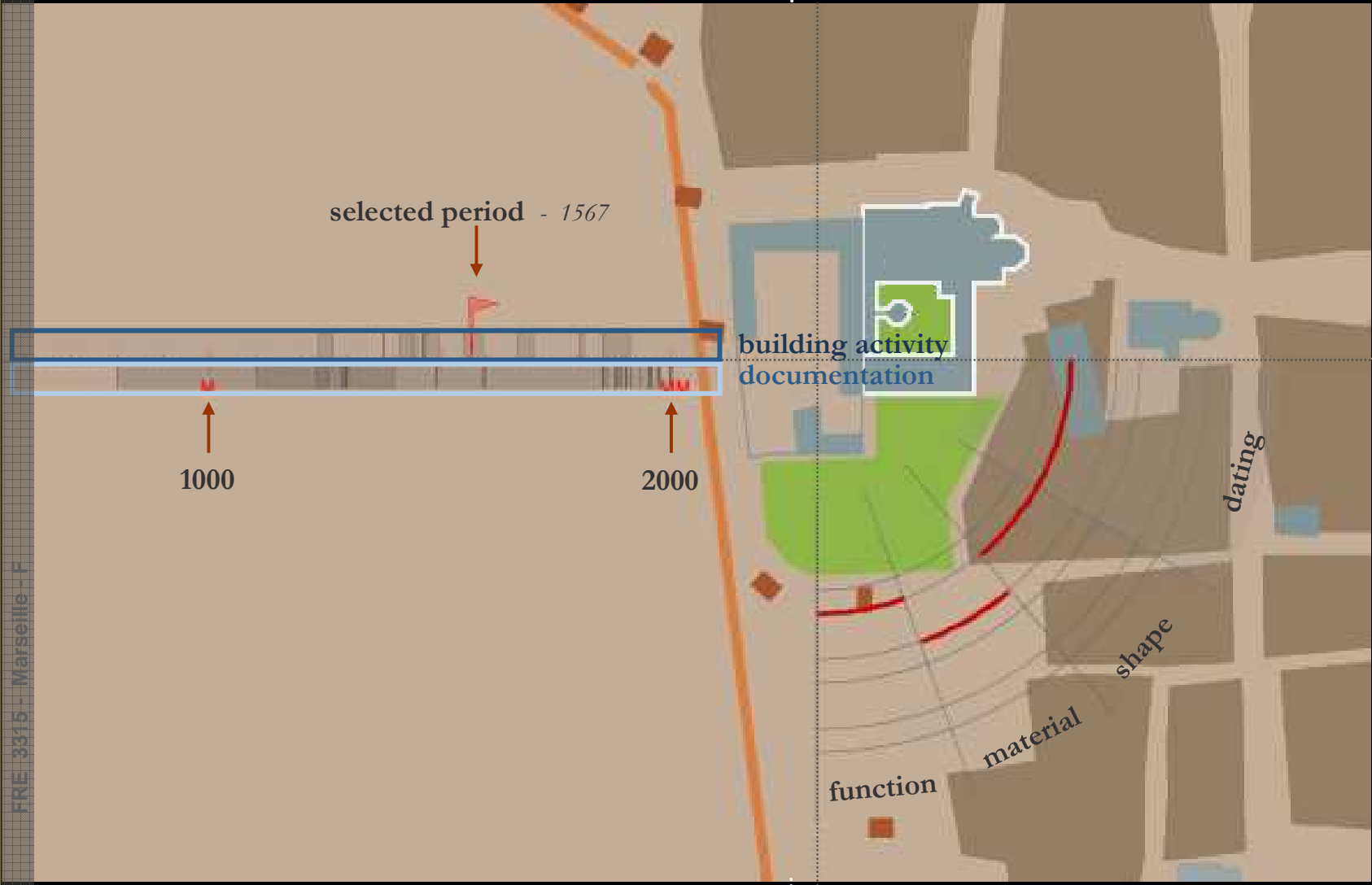
- observation
- direct documentation
- documented hypothesis
- hypothesis
- analogy?



Visual tools decipher historic documentation
case studies
content of DB - chronology

Terrains d'interventions

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Visual tools decipher historic documentation
case studies
architectural content of an author's publications

Terrains d'interventions

0 view architectural content | 1 select by | 2 authors | 3 execute

SoI DB

Select in list:

- Grzywiński [J.]
- Guca [J.]
- Gustaw [Romuald]
- Głogowski [Jerzy]
- Gąsiorowski [B.]
- Habela [J.]
- Hendel [Zygmunt]
- Hermanowski [Józef]
- Hiżycka [Joanna]
- Hoefnagel []
- Hoffmann [Karl]
- Hogenberg [Franz]
- Hordyński [P.]
- Jakubowski [Z.]
- Jamka [Rudolf]
- Jamroz [J.]**
- Jelicz [A.]
- Jelonek-Litewka [K.]

find corresp. instances

display document spatial visualisation

author : Jamroz J.

publications : Mieszcząska kamienica krakowska
Collection
Restauracja gmachu Sukiennic
Text
Gółycka kamienica krakowska
Collection
Wstępne wyniki badań nad siecią drożną Krakowa oraz badania nad zabudową Krakowa średniowieczną
Text
Studium analityczne układu przestrzennego Rynku Głównego i przyległych bloków
Still image


- FortificationUnitTrace - original
- FortificationUnitTrace - CopyOfPrevious
- FortificationUnitTrace - CopyOfNext
- GreenArea - Original
- GreenArea - CopyOfPrevious
- GreenArea - CopyOfNext
- Squares - Original
- Squares - CopyOfPrevious
- Squares - CopyOfNext
- Street - Original
- Street - CopyOfPrevious
- Street - CopyOfNext
- UrbanBlock - Original
- UrbanBlock - CopyOfPrevious
- UrbanBlock - CopyOfNext
- UrbanEdifice - Original
- UrbanEdifice - CopyOfPrevious
- UrbanEdifice - CopyOfNext

Visual tools decipher historic documentation
case studies
architectural content of an author's publications

Terrains d'interventions

author: Stachowicz Michał

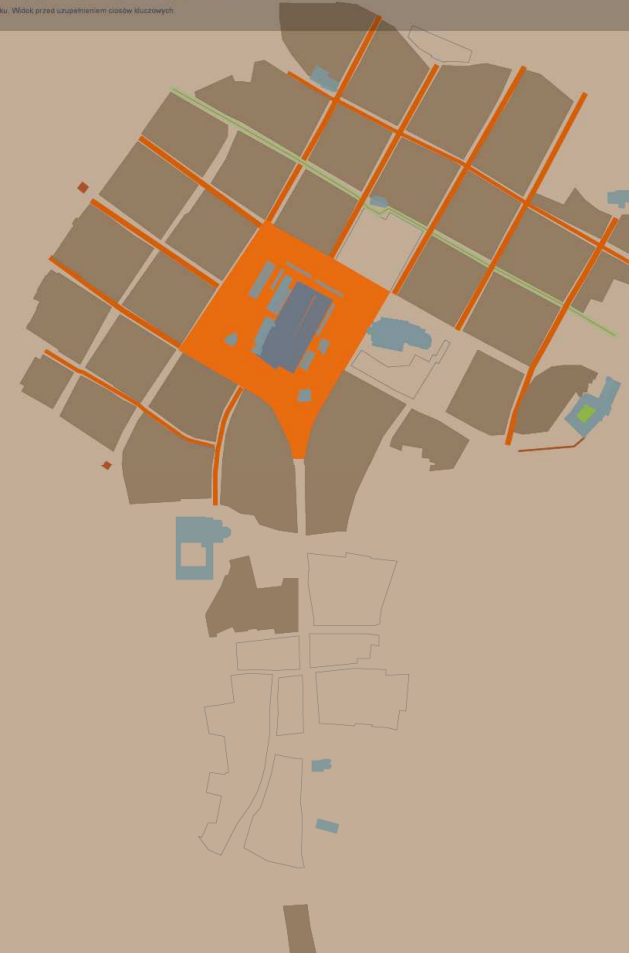
publications:
Cracovia dnia 17 Augusta 1796 (Pochód ks. Auersperga przez Rynek)
Str. map
(Rynek Główny od PD, jako to - sprowadzenia do Krakowa jeńców i zdobytych armat spod Racławic)
Str. map
(Procesja z chórkami towarzysząca przeniesieniu Akademii z Bawoli do Krakowa)
Str. map
Wnętrze Kramów Bogatych
Str. map
Cracovia dnia 17 Augusta 1796 (Pochód ks. Auersperga przez Rynek)
Str. map



The image shows a detailed architectural plan of the central square area of Cracovia. A central square, the Rynek Główny, is highlighted in a bright orange color, indicating the primary area of intervention. The surrounding streets and buildings are shown in a light beige tone. The plan is overlaid on a grid, and the text on the left lists various publications and maps by Michał Stachowicz, many of which focus on the square and its historical context.

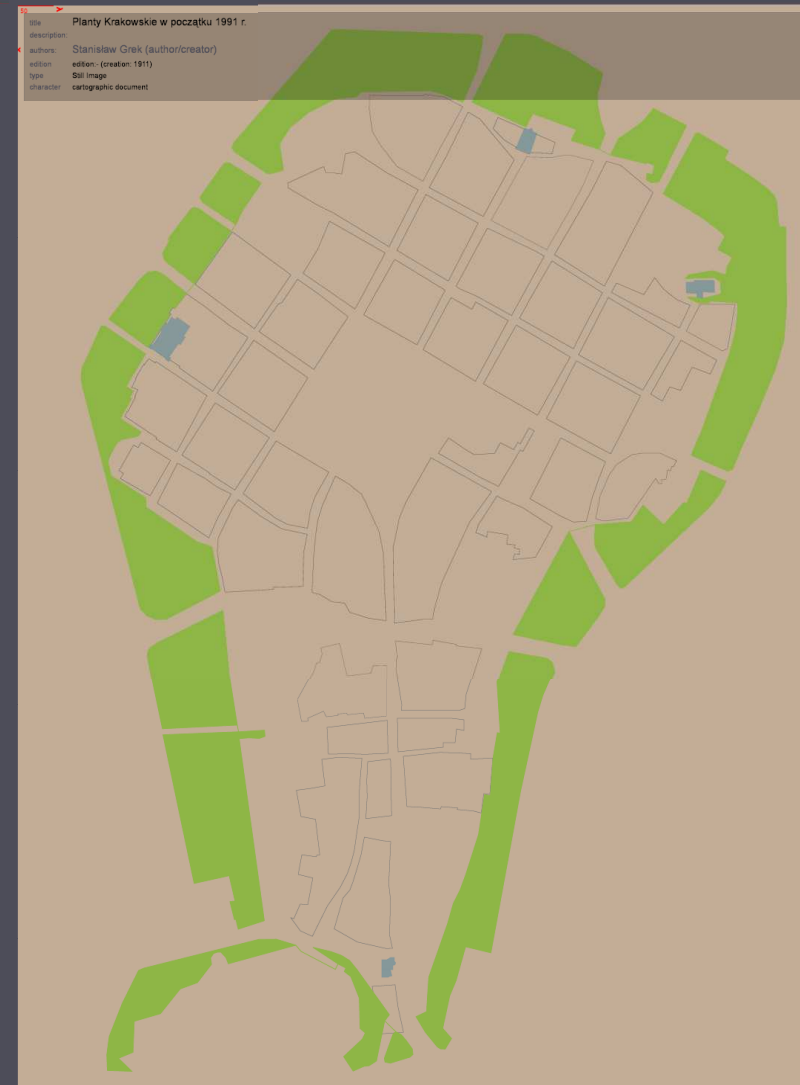
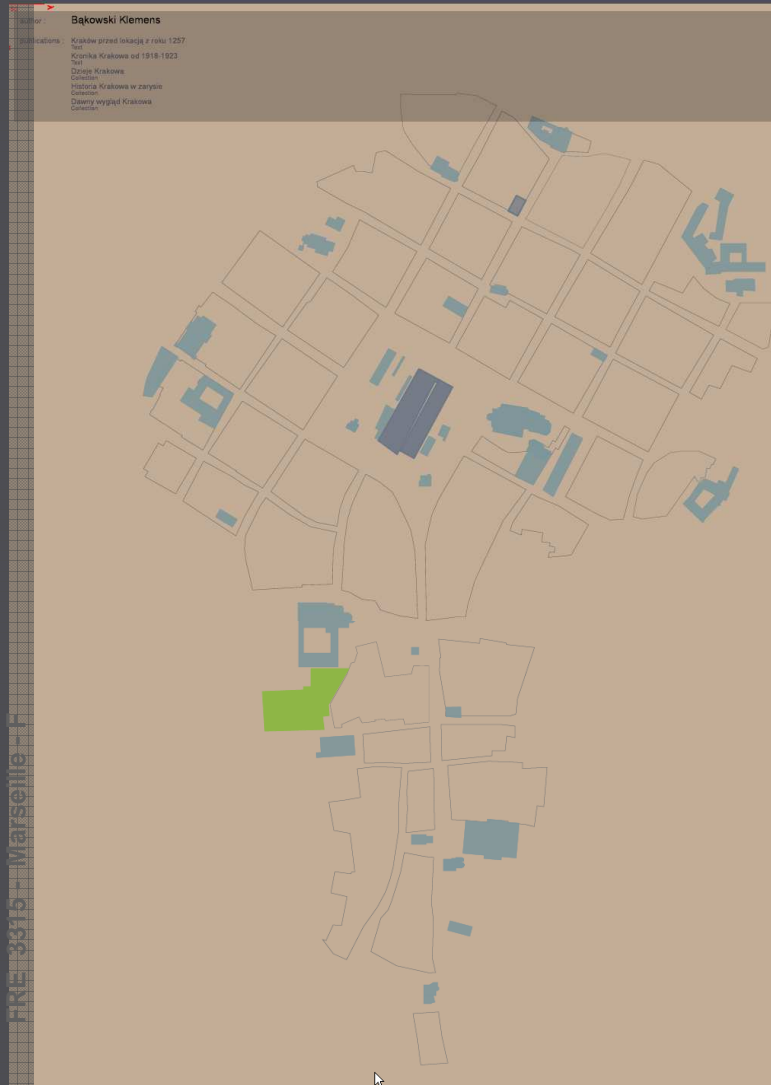
author: Świszczowski Stefan

publications:
Gródka i mury miejskie między Gródkiem a Wawelmem
Gródka
Sukcesje na Ryńku Krakowskim w epoce gotyku i renesansu
Gródka
Problem Krakowskiego Ryńtu
Str.
Brama na Gródku. Projekt tymczasowej konserwacji, zrealizowany częściowo w. 1947
Str. map
Brama na Gródku. Wzrost przed uzupełnieniem ciosów słupowych
Str. map



The image shows a detailed architectural plan of the central square area of Cracovia, similar to the one on the left. In addition to the orange highlighted central square, several other areas are highlighted in green, indicating additional intervention zones. The plan is overlaid on a grid, and the text on the left lists various publications and maps by Stefan Świszczowski, focusing on the square's history, its walls, and specific architectural projects like the Gate on the Ghetto.

Terrains d'interventions



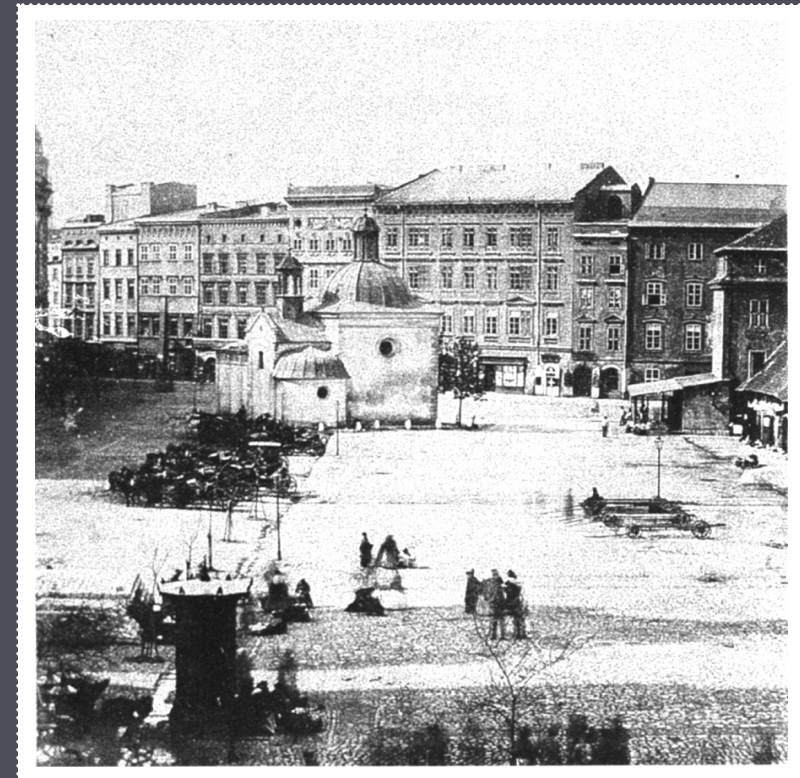
Visual tools decipher historic documentation

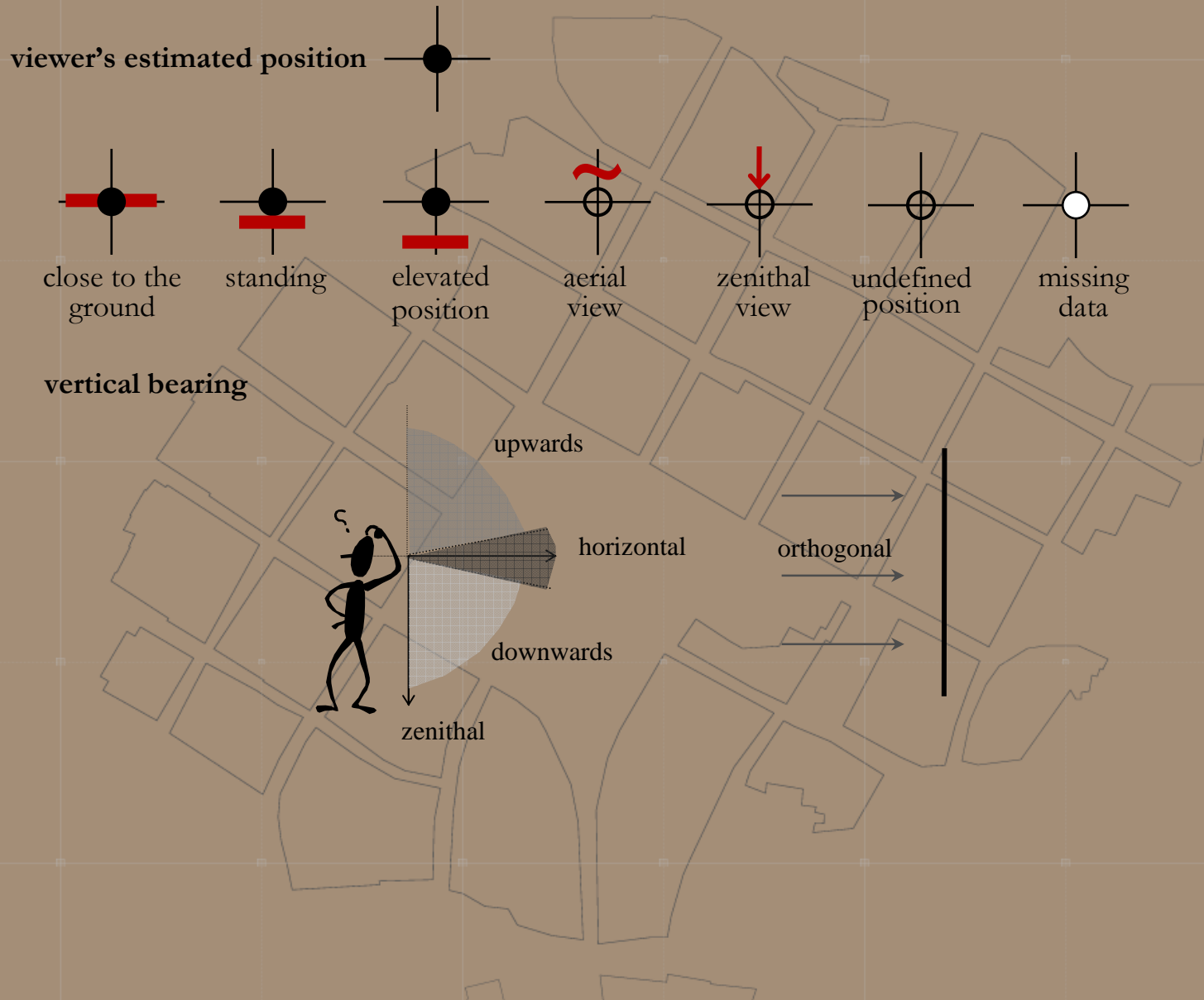
case studies

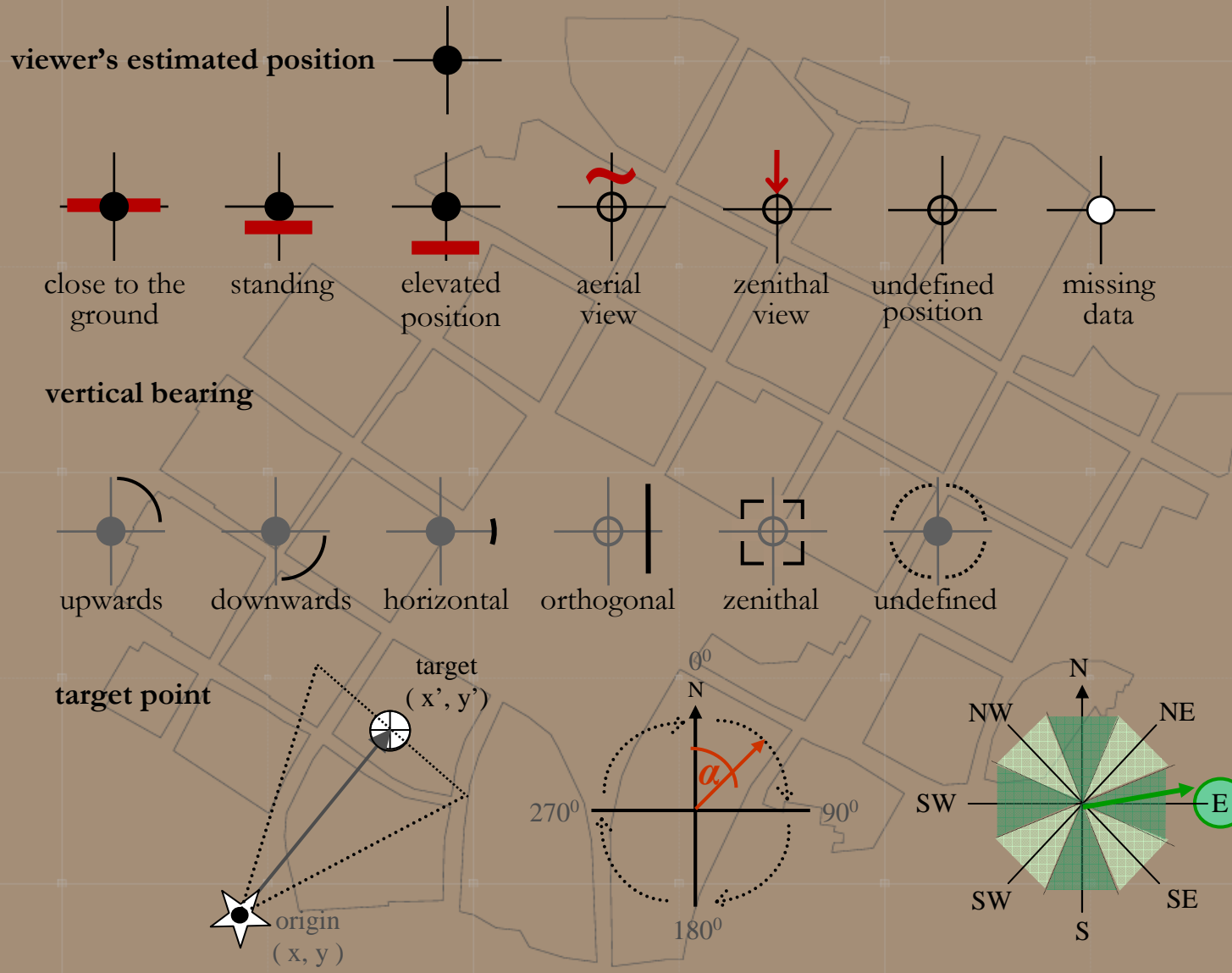
architectural content of a document

viewer's estimated position

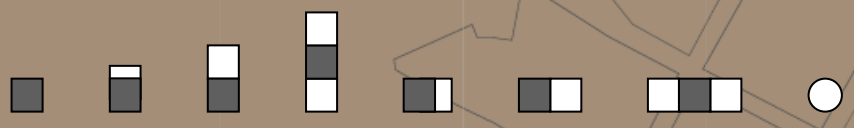
Terrains d'interventions












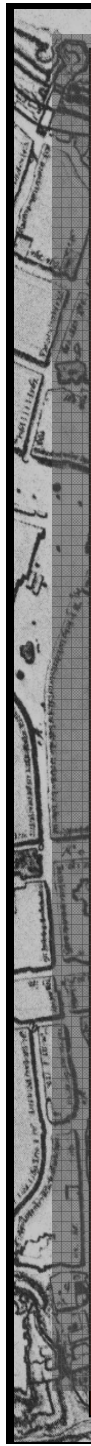


image's ratio



source type

						
physical model	diagram	archaeological drawing	architectural drawing	artistic representation	photograph	undefined



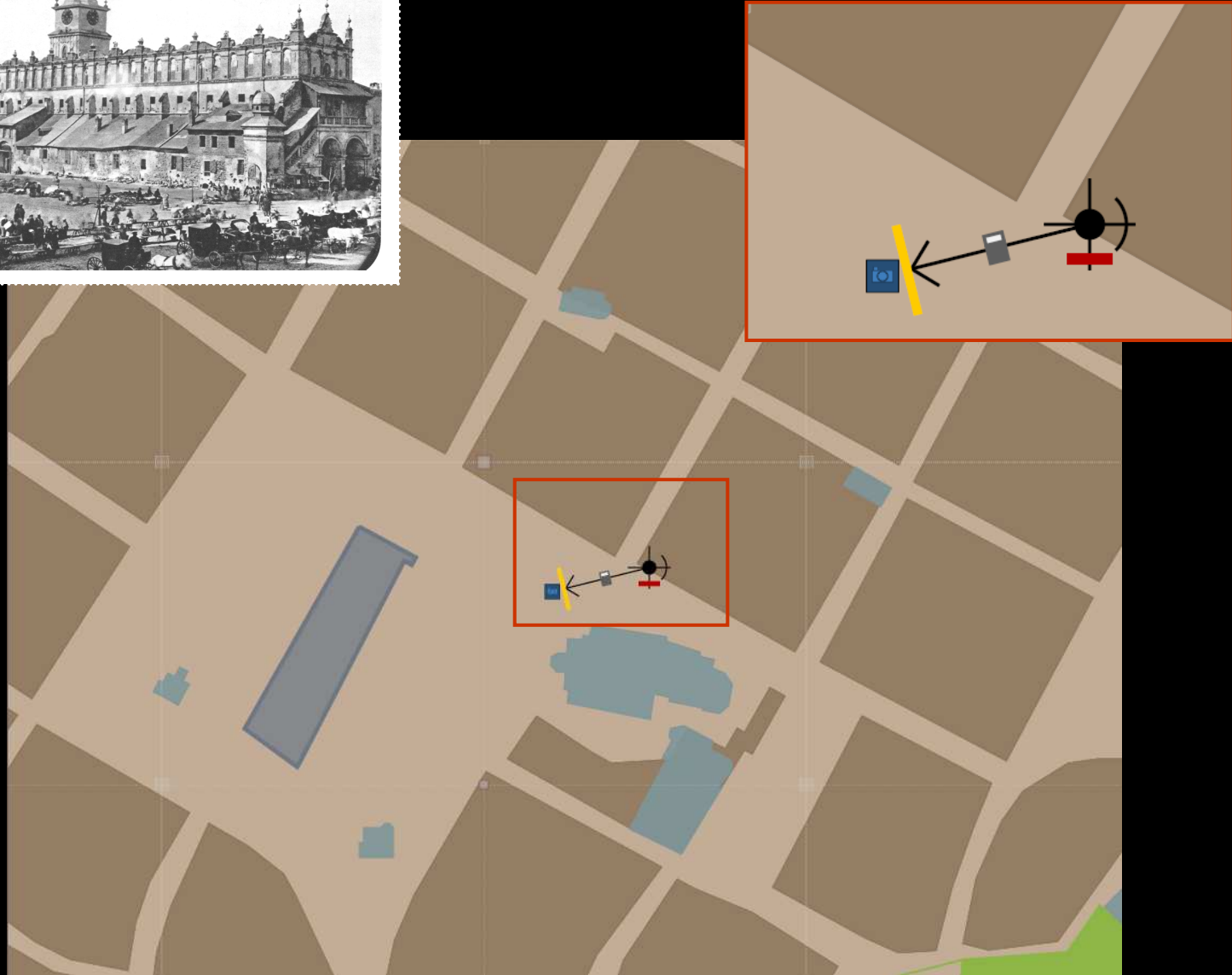
Case studies

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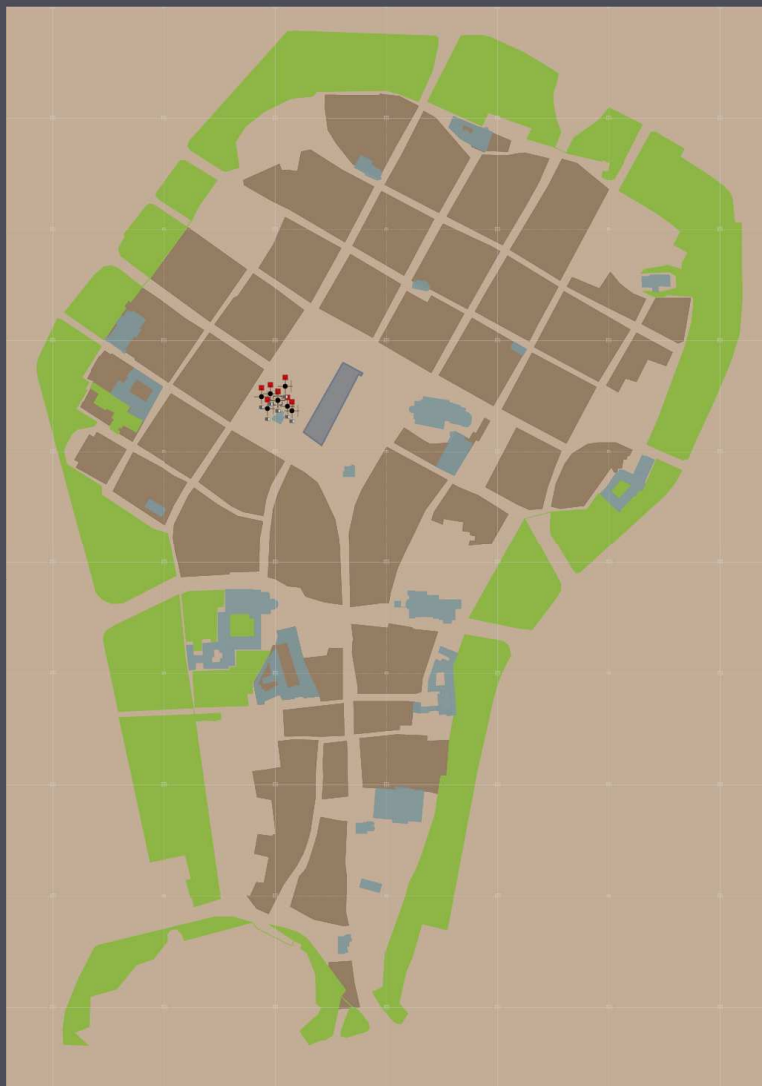
Visual tools decipher historic documentation case studies, implementation

[I. Krieger, *Sukiennice od strony północno-wschodniej, stan przed odnowieniem, 1870*]

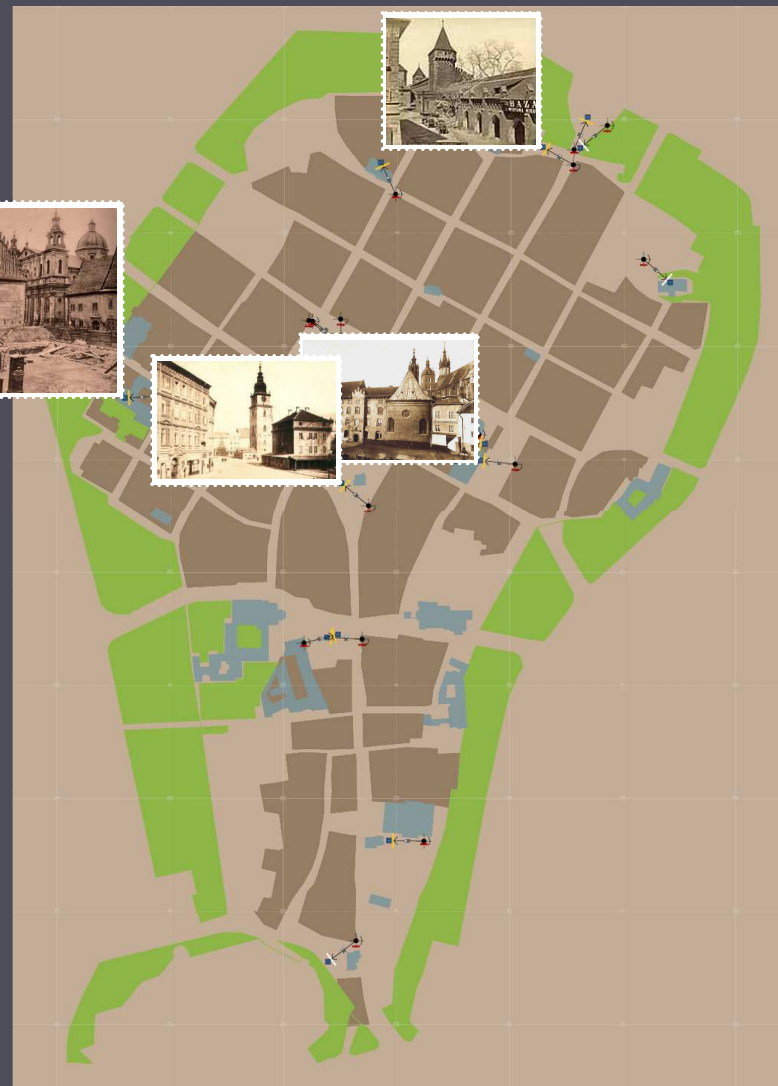


Case studies

UMR CNRS/MCC 694 MAP - Marseille - F



Schmaus von Livonegg - engineer

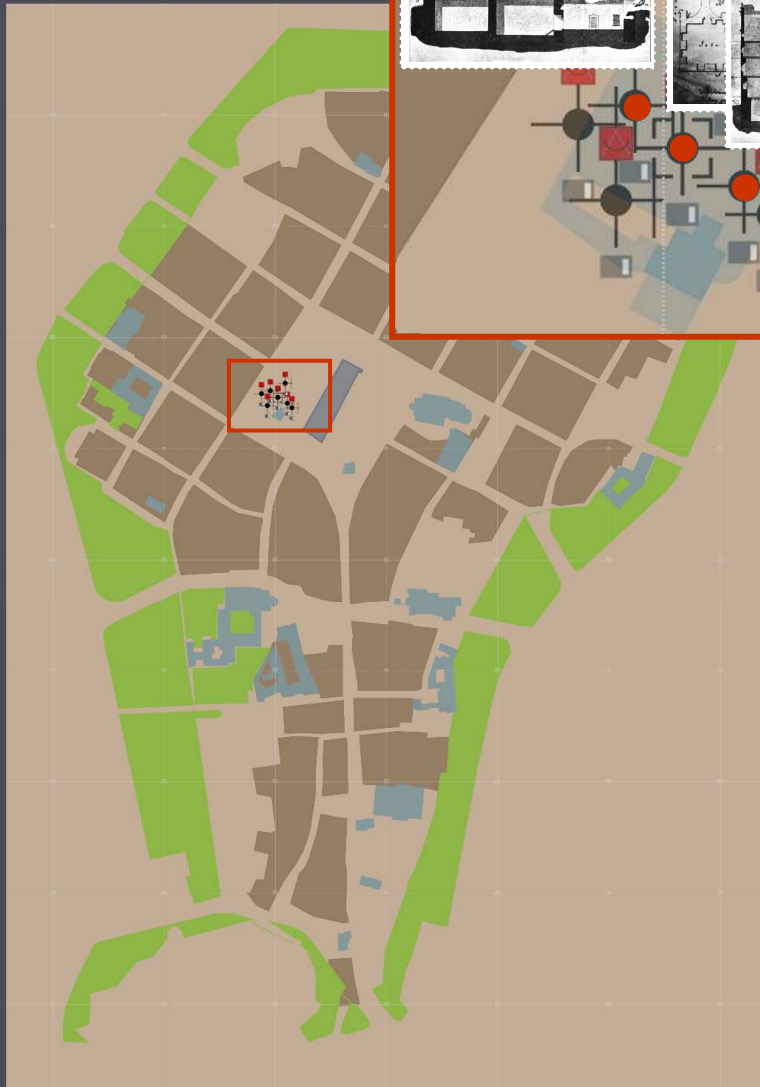


Ignacy Krieger - photographer

Case studies

UMR CNRS/MCC 694 MAP - Marseille - F

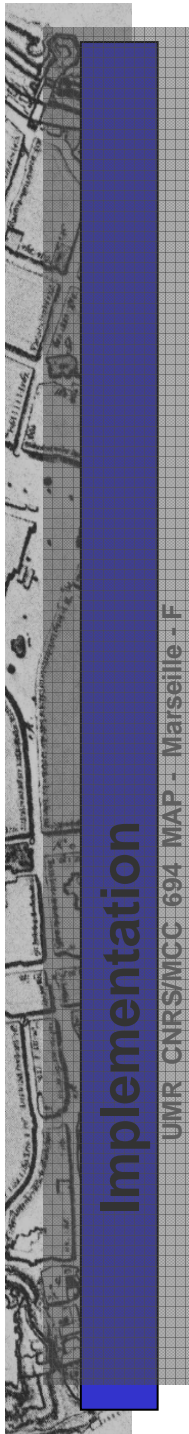
Visual tools decipher historic documentation
case studies



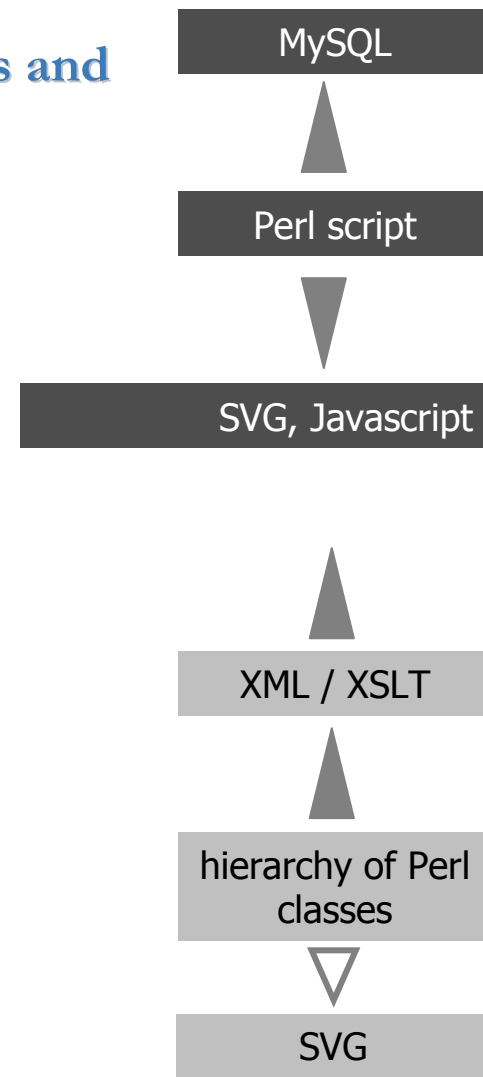
Schmaus von Livonegg - engineer



Ignacy Krieger - photographer



Visual tools decipher historic documentation
implementation



**... reveal through
visual means the
analysis of artefacts'
documentation ...**

evaluation

representation problems

benefits

show what is known

ex. information credibility level,

n° of photographs showing the town hall's 12th evolution, ...

underline lacks of information,

ex. no direct documentation confirming proposed hypothesis

visually stress factual errors in databases,

ex. two object situated in the same place

enhance language precision - reduce "softness"

perspectives

visualisation of architectural content of :

- **"multi-point" visual sources,**
- **documents for which the determination of origin and target points is problematic,**

visualisation of architectural content of textual sources,

visualisation of historical context,

interdisciplinary co-operations