Research possibilities created by making manuscript images available online

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Why are we digitizing at all?

• To make cultural objects available, to contribute cultural heritage to the digital culture

• To make information retrieval easier (search for metadata, full texts)

• To reveal unknown things
Digital Culture: Twitter
Digital Culture: Pinterest
A Pluralistic View on CHO

Intention, Content, Meaning, Semantics

Holistic: object as a complex sign

Unique physical object, materiality

Feature set

Work, Structure

(linguistic) Code, System of Symbols, Iconography, ...

(based on the „Text Wheel“ by Patrick Sahle: Digitale Editionsformen, III, 2013)
Images in a Pluralistic View on CHO?

- Holistic object as a complex sign

- Unique physical object, materiality

- Intention, Content, Meaning, Semantics

- Work, Structure

- Feature set

- (linguistic) Code, System of Symbols, Iconography, ...
Search: Himanis

You are here: home » chancery » JJ026 » page 228
2 matches found for "tempore" with an average confidence of 100！

← Previous | Next →
monasterium.net: making available

• Online since 2002
• Currently: 169 Archives; 1951 Fonds; 183 collections
• 624.919 charters, 842.945 images
• Images!!!
  – Even images without description
Images in MOM: Reveal The Unknown

• Palaeography
• Notarial Signs
• Layout
• Illuminations
• ...

[Images in MOM: Reveal The Unknown]

• Palaeography
• Notarial Signs
• Layout
• Illuminations
• ...

[Images in MOM: Reveal The Unknown]
Palaeography

• DigiPal: Database of palaeographical descriptions:
  – Characters used (verbal description, image snippets)
  – Hands
  – 210 charters, 1465 manuscripts (samples)

http://digipal.eu
Compare Images

Buttons below the viewports to load the images into the editor:

Imagename: g

Anmerkung:

Anmerkung:
move images, e.g. by overlaying them
Palaeography: GIWIS

Signum Recognitionis

http://monasterium.net/mom/image-collections#Otto%20I.%20Rekognitionszeichen2100132
Notarial signs

- Magdalena Weileder (Munich) – identified in 2014 974 notarial documents from Southern German archives in monasterium.net

  – signa tabellionatus


http://pelavicino.labcd.unipi.it/notai/
Notarial Signs

• Magdalena Weileder (Munich)
  – identified 974 notarial documents from Southern German archives in monasterium.net
  – Team of Vincent Chistlein (Erlangen): annotate notarial signs
Find rare objects

Like:

• Notarial documents in German archives in late middle ages
• Monograms of high medieval emperors in the whole set of charters

... automatically?
Still one of the best line detection algorithms available!
Layout detection: Transkribus
Layout: ImageJ/Ilastik
Layout: ImageJ/Ilastik
Illuminated Charters

• Martin Roland, Andreas Zajic, Gabriele Bartz, Markus Gneiß, Martina Bürgermeister, Georg Vogeler, FWF funded (P 26.706)

• Classification of decorations (Martin Roland 2014):
  – 1: Historiated, with colors
  – 2: unconventionally rich
  – 3: Graphical signs as means of authentication

http://illuminierteurkunden.uni-graz.at
Illuminated Charters

Collection: Illuminierte Urkunden

Collections > Illuminierte Urkunden

Preface

English version below

Urkunden dieser Sammlung aus Vorschaubildern anzeigen / Show the charters of this collection as thumbnails

Suche in der Sammlung / Search in the collection:

Teilmenge "Cimelia"

Teilmenge "Bischofsammlerablässe"

Teilmenge "Frankreich"

Teilmenge "Lombardei (auf Deutsch)"

Teilmenge "Lombardia (in italiano)"
Worshop in Avignon 1328-1348

Wien, Archiv des Schottenstifts Wien, sub dato (alt: Scr. 24 A. Nr. 1a)
http://monasterium.net/mom/IlluminierteUrkunden/1328-05-12_Wien/charter
Space for local illuminations

Finding Them with Metadata

• Archives aren’t interested in visual appearance of documents:
• Use generic terms like „indulgence“, „coat of arms“

• But:
  – Ludwig IV, German Emperor
  – Charles V, French King
  – Spanish privilegios rodados
  – ...
# Illuminated Charters: Confusion Matrix (Christlein 2018)

<table>
<thead>
<tr>
<th>Niveau</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>precision</th>
</tr>
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<tbody>
<tr>
<td>Niveau 1</td>
<td>336</td>
<td>87</td>
<td>4</td>
<td>25</td>
<td>74%</td>
</tr>
<tr>
<td>Niveau 2</td>
<td>97</td>
<td>1459</td>
<td>90</td>
<td>288</td>
<td>75%</td>
</tr>
<tr>
<td>Niveau 3</td>
<td>1</td>
<td>56</td>
<td>342</td>
<td>75</td>
<td>72%</td>
</tr>
<tr>
<td>Niveau 4</td>
<td>32</td>
<td>897</td>
<td>113</td>
<td>6094</td>
<td>85%</td>
</tr>
</tbody>
</table>

Niveau 1: historiated
Niveau 2: decorated
Niveau 3: Graphical authentication
Niveau 4: No graphical elements
Illuminated Charters: Confusion Matrix  
(Christlein 2018)

<table>
<thead>
<tr>
<th>Human attribution</th>
<th>Automatic attribution</th>
<th></th>
<th></th>
<th></th>
<th>precision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Niveau 1</td>
<td>336 87 4 25</td>
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Niveau 1: historiated  
Niveau 2: decorated  
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Charts with drawn (graphic) decoration or display scripts with decorative character, exceeding the contemporary standards and/or characteristic for the production of chancelleries. The graphic decoration became more and more elaborate from 13th century onwards. Therefore the selection must refer to a standard of the specific period.
Digital Images as Representations of CHO

• Allow perception of visual culture
  – Do not allow full perception of the object!

• Allow creation of „visual lists“ (re-contextualisation)
  – Supported by pattern recognition

• Allow approximation to human classification of visual elements:
  – Layout, Existence of visual elements
  – taking into account broader context?
Images in a Pluralistic View on CHO

Intention, Content, Meaning, Semantics

(Visual) object as a complex sign

Unique physical object, materiality

Feature set

Work, Structure

(linguistic) Code, System of Symbols, Iconography, ...
Computational Analysis of Digital Images of CHOs is a typical DH problem:

1. ... is available for single humanities researchers only for simple tasks
   1. computing power
   2. unfamiliar tools

2. ... needs translational work between CS methods and humanities research interest

3. ... needs to be interpreted by the scholar
Research possibilities created by making manuscript images available online are enhanced by computational analysis of visual representations of CHO!

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Computational Analysis of Visual Representations of CHO is not yet „digital humanities“ — but almost!

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http://gams.uni-graz.at