An ontology to support non-invasive diagnosis of heritage metals

Alessio De Santo, Yann Vonlanthen, Antoine Rosselet, Christian Degrigny and Cédric Gaspoz

Information Systems and Management Institute,
HES-SO // University of Applied Sciences of Western Switzerland,
HEG Arc, Neuchâtel, Switzerland
{alessio.desanto, yann.vonlanthen, antoine.rosselet, Christian.degrigny, cedric.gaspoz}@he-arc.ch
Summary

• Context
• Building an ontology
• Utilisation
• Evaluation and results
• Conclusion
Context
Understanding the forms of corrosion to choose an appropriate conservation protocol
(Rosselet, Grosjean, Degrigny & Gaspoz, 2016).
Building an ontology
Utilisation

Keywords:
- Unif
  - Uniform - intergranular
  - Uniform - pitting
  - Uniform - selective
  - Uniform - transgranular
**Evaluation and results**

53% of the ontology content appeared at least once in the articles

16% of the ontology content were found in all articles

71% of the words with the highest frequency among the text corpuses were present in the ontology
Conclusion

• Identification of the main underlying concepts, attributes and relations of the conservation-restoration field of study.

• The generated ontology was tested for completeness and for its ability to make relevant inferences.

• Opening the way to the implementation of the ontology as a diagnosis tool.
Thank you for your attention...