



Migration of Colors: Digital Consolidation and Mapping of Material Art History.

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Introduction

Object authentication, authorship attribution to a given artist, a movement, or people, depends on precise knowledge about terminal dates and location of use of artistic materials. Information to related object is frequently hindered by inefficient data access and generalizing approximations. The present work is an effort to consolidate and curate such data through automated methods.

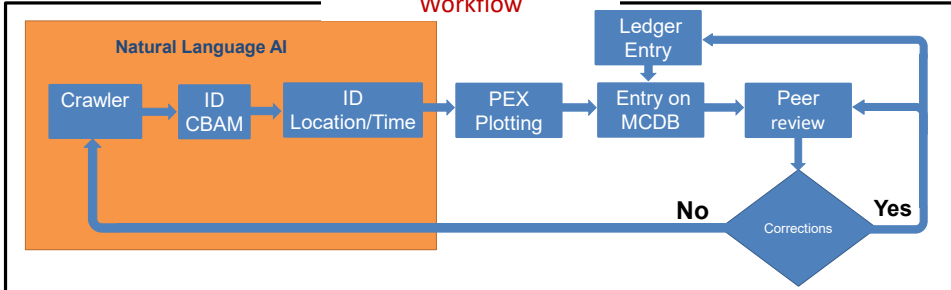
Methods

The use of already existing knowledge into a searchable database and optimized dynamic visualization maps. The cumulative body of information generated by different authors and research groups can be mined using artificial intelligence and a self-sustainable review system.

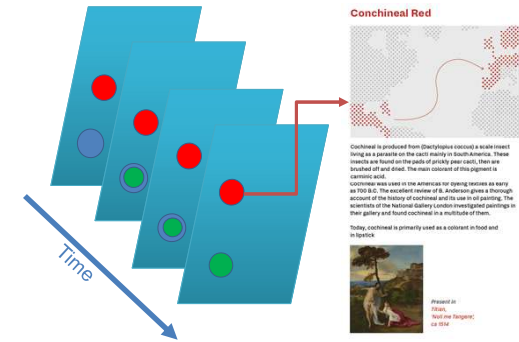
Building the MCDB Database

Natural language analytical algorithms consolidate the data found in diverse sources into the Migration of Colors Database. The workflow generates time/layered maps, using a crawler software and sends the results for peer review. Specific location and time for each CBAM (Colorant, Binder or Artistic Material) is to be collected and then be placed in a Chronologically specific map, populated by *Points of Existence* or PEX. There is ought to be a map for each moment in time and a PEX will be registered in all relevant times. Maps used: Due to geographical differences over time, modern maps recreating such differences are necessary, following the appropriate dates.

Workflow



PEX Plotting and Timelines.



The source article is indexed with the relevant PEX for each map, with a different map for each time.

It is possible to quickly assess if CBAMs are anachronistic.

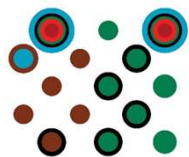
Example of Produced Maps



Query-Generated Maps

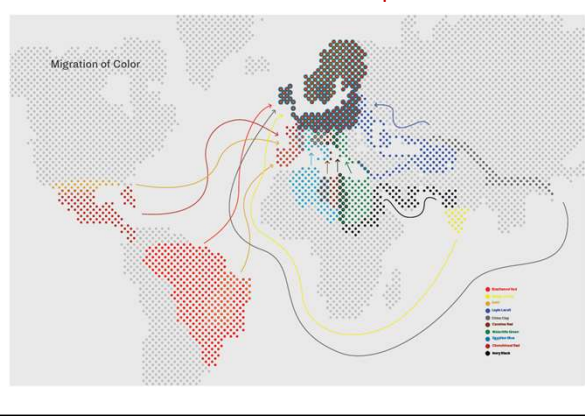
Maps can be generated by queries on the database by parameters such as time span, geography or specific CBAM.

PEX of several CBAMs can be combined as overlaid concentric circles for visual reference and representing the changing of available palettes.



Detail of overlapping maps.

Combined Map



Conclusions

The present solution was found to be theoretically viable and enough open sources are available to give the database enough momentum.

The system demonstrate to be very dependent in *en masse* adoption.

Give the high stakes involved in the authentication of major works of art, the relative complexity and cost of the system was found justifiable.

References

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Acknowledgments

This poster is dedicated to our clients and supporters, and all those who endured hardship during the pandemic.

