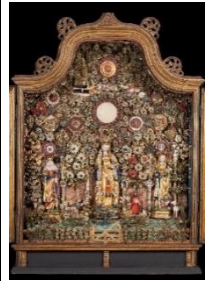


PRESERVATION OF MIXED-MEDIA OBJECTS: AN ONLINE DECISION-SUPPORT TOOL

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Background: ArtGarden - Art Technical Research and Preservation of Historical Mixed-Media Ensembles: "Enclosed Gardens"



The Malines City Museum in Belgium preserves seven medieval Enclosed Gardens. They are wooden retable cabinets with virtually countless little elements composed of a multitude of materials in complex configurations: brass and silk flowers, glass and brass berries, polychrome wooden statuettes, paper banderoles, etc. The restoration of these extraordinary Belgian heritage artifacts were the starting point for the network project ArtGarden. This research project, led by KIK-IRPA, provides a (computer-based) management tool, as one of the expected outcomes, to help preserve complex and fragile heritage objects in mixed media, of which the Enclosed Gardens of Malines are considered as a case study.

Figure 1: Enclosed Garden with Saint Elisabeth, Ursula and Catharina, 16th century; © KIK-IRPA, Brussels



Figure 2: Detail of combined materials; © KIK-IRPA, Brussels

Objective: ArtGarden Decision Support Tool - AGATO

The ArtGarden Decision Support Tool, AGATO, aims to assess risks for historic mixed material artefacts in a given context and help the user with recommendations for preventive conservation decisions for the object's preservation. These are based on the user's input of elementary information on the object, on its materials, their condition and the environmental conditions.

Approach: Developing AGATO

- Outline and overall concept: comprehensive risk analysis principles applied to individual objects
- Content management system (CMS): standardized warnings, references, recommendations for risk reduction through research in existing technical and scientific literature on material degradation, material interactions, and risk assessment in preventive conservation; integration of photo documentation on degradation phenomena and laboratory experiments on several ArtGarden case-studies
- QuiskScan © on a mixed-media case-study in function of the development of the automated assessment

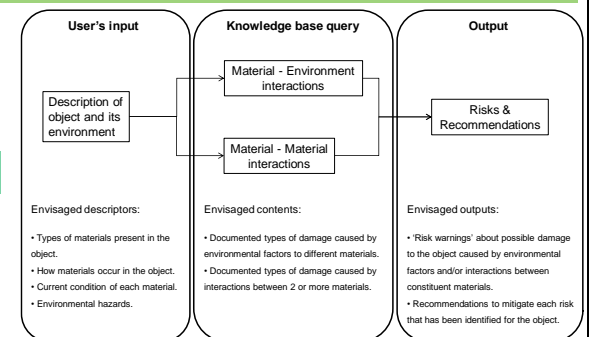


Figure 1: AGATO Concept; © KIK-IRPA, Brussels

From left to right:

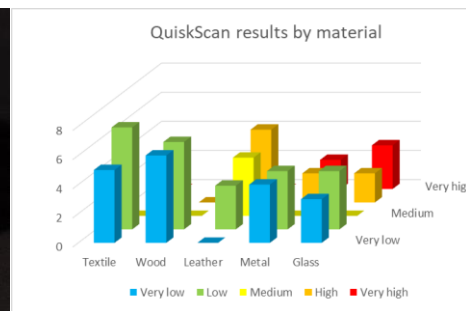
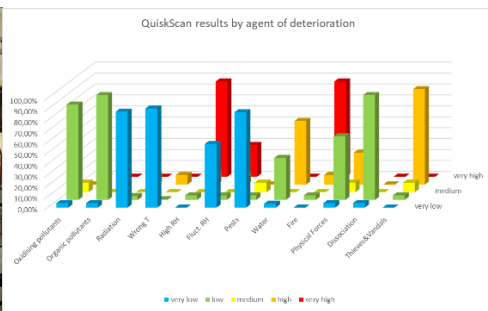
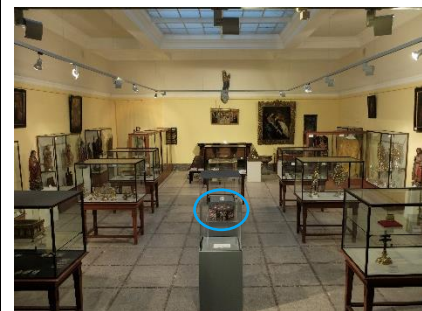


Figure 4: Musée Diocésain de Namur, photo Hélène Cambier © Musée diocésain de Namur; Figure 5: Quiskscan © results, agents of deterioration; Figure 6: Casket for the crown reliquary of Holy Thorns; Figure 7: Quiskscan © results, materials; Figures 5, 6, 7: © KIK-IRPA, Brussels

Results & Case-study

AGATO guides the online user in the inspection and observation of his/her historic mixed-media object and its environment, using the 10 agents of deterioration. Once an assessment completed, the user obtains risk warnings and risk reduction recommendations by means of the 5 stages of control.

The 'risk warnings' will be ordered either starting from the most significant until the least relevant for the object, or ranked by material or by agent of deterioration. This outcome orients the user to potential sources of harm for the object in its particular environment, and indicates the materials to check and monitor because of their vulnerability in the given environment.

www.AGATO.kikirpa.be [test phase]
Figure 8: Input and output screens AGATO; © KIK-IRPA, Brussels

The screenshot shows the AGATO web interface. It includes a navigation menu, a main content area with a 3D model of the casket, and a detailed assessment form. The form is divided into 'Phase 1 - step 3: Material condition' and 'Phase 1 - step 4: Environmental hazards'. The 'Material condition' section has checkboxes for 'Leather-brass-enclosed', 'Leather-oak-enclosed', and 'Brass-oak-enclosed' materials, with sub-sections for 'Leather' and 'Brass' conditions (Good, Fair, Poor). The 'Environmental hazards' section lists various risks like handling, vibration, and light exposure, with checkboxes for their presence. The output screen shows 'Risk warnings and recommendations' for the casket, including a specific warning for 'Leather - Light'.

Discussion & Conclusion

The ranking of risks (& recommendations) will depend entirely on the inputs entered by the user concerning the materials relative abundance or significance in the object. The more precise the inputs, the better the recommendations will apply to the object. With the output given by AGATO, the user will still have to determine which action to undertake depending on his/her situation, intention and the resources available.

Currently AGATO includes the materials encountered in the Enclosed Gardens, only historic media. The CMS is designed to add more recent or modern materials (eg. synthetic materials or modern alloys) or new research results, in a follow-up project. The use of AGATO can be mapped.

Acknowledgments & References

acknowledgments: Belgian Federal Public Planning Service Science Policy (Belspo), BRAIN-be research-program, ArtGarden (2016-2022) | Multimedium | Musée Diocésain de Namur
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