

# Building an Online Collaborative Knowledge-Base for Art Conservators

Jane Hunter and Suleiman Odat  
The University of Queensland

This paper describes the results of a collaboration between the University of Queensland and the Asia Pacific Twentieth Century Conservation Art Research Network (APTCCARN), that has developed an online semantic knowledge-base, that enables the integration, sharing and re-use of cross-disciplinary data and knowledge about the conservation of paintings.

More specifically this paper will describe the development and evaluation of three main outcomes to date:

- The OPPRA ontology that was developed to support interoperability between, and federated searching across (materials, chemicals, paints/pigments, artists, artistic techniques) databases associated the conservation of paint and paintings;
- Web interfaces and a repository to support the capture, storage, search and retrieval of experimental and characterization data that investigates the processes associated with paint degradation and conservation treatments;
- Semi-automatic techniques to extract structured data from existing publications (on paint conservation) to expedite the discovery and re-use of knowledge;

The outcome is a framework that will hopefully enable paint conservators to improve their understanding of paint decomposition and degradation processes, and to identify and document new methods for stabilizing, protecting and repairing our culturally significant but fragile artworks.

**Keywords:** materials knowledgebase, ontology, paint, conservation