

MOSAIC: Shades of Grey

Keith G. Jeffery, Science and Technology Facilities Council, United Kingdom
and Anne Asserson, University of Bergen, Norway

Abstract

Grey literature covers a wide range of artifacts. As indicated in a previous paper (Jeffery and Asserson 2004), the authors consider a grey literature repository in a research-based organisation to record the intellectual property of that organisation. However, this is only usable effectively if the repository contains the grey objects and the metadata is formalised (Jeffery 1999, Jeffery and Asserson 2004) or – better – stored and accessed in a CERIF-CRIS (Common European Research Information Format – Current Research Information System) (Jeffery and Asserson 2005). In this way the grey resource is available in the context of the work of the research organisation and/or its stakeholders managing research strategy, research evaluation, funding and cost-accounting, innovation and knowledge transfer and public information (Jeffery and Asserson 2005). This was further refined as 'Greyscale' (Jeffery and Asserson 2007) and the technologies for interoperation surveyed (Jeffery and Asserson 2008). A suggestion for using advanced hyperactive objects for research output workflow linked to a grey repository (Jeffery and Asserson 2006c) was set aside to await later reconsideration.

The key messages are:

- 1. conventional grey literature repository metadata (usually based on DC (Dublin Core)) is insufficient;*
- 2. great advantages are achieved when a grey repository is linked to a CERIF-CRIS: contextual metadata, workflow, interoperation and organisational integration;*

The adoption of such an architecture ensures:

- a lower effort threshold on input (workflow, formal metadata) and hence increased repository fill;*
- improved retrieval (formal metadata, semantic links);*
- improved support for workflow and the research process (formal metadata, semantic links);*
- improved links to other within-organisation systems (formal metadata, semantic links) including repositories of research datasets and software, library catalogs and systems for finance, HR, project management, directories, web-pages;*
- improved interoperation with the systems of other organisations (formal metadata, semantic links);*

Mosaic was the original graphical user interface web browser. It provided a new way of accessing information – although it required considerable human effort/time to browse and click on links.

A CERIF-CRIS provides a new way to access and utilise grey information but encourages the user to let the computer system do the tedious work leaving the end-user free to do their research. This is achieved by the use of the formal syntax and defined semantics of CERIF entities, attributes and linkage together with as much or as little intelligence in the system as the user requires. The information space (the grey information mosaic) is navigated reliably and reproducibly by the computer, not the user. Presented through a web browser (the viewer mosaic – perhaps based on Mosaic) the ease of use remains but with a much more powerful information management capability.

Background

Mosaics

A mosaic is a form of decoration utilising small pieces of natural material (e.g. stone) or artificial material (e.g. glass) to form artistic patterns. Mosaics are usually found as floor, wall or ceiling decoration. The best mosaics have the pieces ordered by colour or greyscale into geometric forms. Thus like pieces are composed together to form a representation of an abstract geometric form (commonly squares, 'greek key pattern' swastikas...) or a form representing observed (e.g. the famous dolphin mosaic at Delos) or imagined (e.g. representations of God in Orthodox churches) nature. The key points about mosaics are (a) they are designed; (b) they have a formal structure; (c) the formal structure consists of small pieces composed into structures and those structures composed into larger structures; (d) they represent something in the human mind; (e) they communicate the idea in the human mind from originator to others; (f) they take considerable effort to construct.