

# The COG Scrapbook

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## Introduction

In many electronic documents a page is put together as an integrated and almost indivisible sequence of material. The underlying page description language will often arrange for graphic properties to be asserted at the level of the whole page (or even as a consistent style across a multi-page document). This approach often makes the last-minute addition, alteration or replacement of material extremely difficult.

The COG model (currently implemented in both PDF and SVG) takes the page as being a blank canvas with no built-in defaults for colours, fonts or any other graphic parameters. Material is imported as final-form Component Object Graphics (COGs) which are encapsulated so that every COG is guaranteed to be independent of all other COGs on the page. This independence guarantees freedom from side effects by requiring each imported COG to bring along its own statement of the graphic resources it needs.

The COG model is ideal for constructing and altering documents with clearly separated and defined blocks of graphic material on any page (e.g. catalogues, pages of advertisements etc). The COG model also allows last-minute alterations to be made by deleting and replacing material at a COG level without the need for regenerating the entire page from first principles.

Our research centres around building tools for COG creation and interactive manipulation as well as allowing for the export and archiving of pages of COGs in a PPML-based XML wrapper.

## The Scrapbook Project

The production of high-quality visual material, such as posters, is traditionally a hard task for untrained people to participate in. While software packages, such as Quark XPress or Adobe's Creative Suite, ease the task, they also suffer from a steep learning curve that makes them suitable only for people who have time to learn the packages. However, COG technology allows us to provide an alternative approach. Since COG technology allows pre-existing graphical components to be easily manipulated on a page in a simple drag and drop approach. By removing the need to drive the complex software, it becomes possible for untrained users to generate high-quality visual displays.

We are looking at using COG technology to allow school children visiting museums to produce large posters. Here, the children will collect COGs (which may be photos, drawings, descriptions of exhibits) by a variety of methods whilst walking around the museum. At the end of their visit, they can 'download' the collected COGs to the museum computer system, where they will be able to use the COG technology to create a montage of the COGs which can then be printed on a large-format printer.

An outline of the system workflow is presented below:

