A Metadata Approach for Cataloguing, Representing and Retrieving Images on the Web

Ana Maria de Carvalho Moura
Simone de Souza Garcia
Instituto Militar de Engenharia - IME/RJ, Departamento de Engenharia de Sistemas,
Rio de Janeiro, Brazil, 22290-270
e-mail: anamoura@ime.eb.br
simone@de9.ime.eb.br

and

Maria Luiza Machado Campos
Universidade Federal do Rio de Janeiro – UFRJ, Departamento de Ciência da Computação,
Rio de Janeiro, Brazil, 20001-970
e-mail: mluiza@nce.ufrj.br

ABSTRACT

This paper presents a formal structure for organizing, representing and retrieving images on the Web based on image semantic description. This structure makes it possible to describe digital static images in general (drawings, paintings, slides, photographs, or any pictorial representation), specifying their properties, and also the components contained in the image, as well as their relationships. The proposed metadata conceptual schema considers not only technical information but also information related to the semantic content of the image, providing a systematic and detailed specification of descriptor elements of static digital images, that can be used in any existing metadata framework. In order to provide schema interoperability on such an heterogeneous and distributed environment like the Web, this metadata conceptual schema for image description has been implemented using both a semi-structured and Database (DB) approach.

Keywords: image metadata, semi-structured, DB, RDF, metadata.