Chapter XXIII

Environmental Reporting in the Public Interest

Hans-Knud Arndt, Mario Christ and Oliver Günther
Humboldt University, Germany

INTRODUCTION

Organizations of all kinds are increasingly forced to develop an environmental conflict strategy. Otherwise, in the case of environmental conflicts an organization may become subject to the rule "if you don't manage issues, issues will manage you" (Health and Nelson, 1986). Organizations in this context may be a companies, corporations, firms, enterprises, authorities, or institutions, or part or combination thereof, whether incorporated or not, public or private, that have their own functions and administrations (ISO 14001, 1996). Environmental management is an integral part of an organization's overall management. With the regard to the implementation of an environmental management system, according to the ISO standard 14001, organizations should establish and maintain procedures for internal and external communications. Environmental reporting is an essential contribution towards the proactive communication of an organization with their stakeholders.

The German standard DIN 33922 environmental reports for the public, issued in 1997, defines an *environmental report* as the report of an organization for the public that documents and evaluates significant environmental aspects. According to DIN 33922, an *environmental aspect* is an element of an organization's activities, products or services that can interact with the environment (DIN 33922, 1997). The *public* according to this German standard consists of:

a) employees;
b) neighbors;
c) media;
d) customers and suppliers;
e) public authorities and other public bodies;
f) federations and
g) interested individuals.

According to DIN 33922, an environmental report for the public shall include at least the following structure (DIN 33922, 1997):

1. a description of the organization's activities;

2. a presentation of the organization's environmental policy and environmental program;
3. a description of the organization's environmental management system;
4. a presentation of significant environmental figures;
5. an assessment of all significant environmental issues;
6. a declaration of formal requirements.

At the European level, the European Council Regulation No. 18836/93 allowing voluntary participation by companies in the industrial sector in a Community eco-management and audit scheme (EMAS) defines similar requirements for environmental reports (note that EMAS uses the term "environmental statement" instead of "environmental report").

In this paper we discuss a novel approach to environmental reporting, which is based on the Extensible Markup Language (XML). XML is a meta language for structuring information, which seems quite suitable for application in the domain of environmental reports and environmental information management. We discuss the requirements for an information management system focusing on environmental reporting, then focuses on the use of XML in this context. Finally, we present our prototype, and then give some ideas for future research.

INFORMATION MANAGEMENT REQUIREMENTS IN ENVIRONMENTAL REPORTING

An environmental report consists of several components, respectively chapters. Different people are in charge of the publication of different sections of the report. For obvious reasons, it does not make sense to wait until one person finishes her part before moving it to the next person for further processing. For the sake of efficiency, one needs collaborative working environments, where several people can work on different parts of an environmental report simultaneously without blocking each other. Such a cooperative information management system has to allow each person to work on his part of the report independently and later merge their components into the final joint document. Such a component-based approach should also address the need for retrieving data from various sources in the organization. Even in a single-user environment, with one person working on an environmental report, this person needs to access a variety of information resources. This is facilitated by an environmental information system.

Since there are lots of possible versions of an environmental report over time, histories about the components of a report, about the structure of a report and about the used stylesheets (when using XML as a data format) at a given date are of utmost importance. These histories have to be accessible by a meta information system. The structure, components and style of a certain report must always be easy to understand. Furthermore, platform-independency of the system and its data is important in heterogeneous company networks. Additionally, the system has to address the need for integrating the several components into one printable report as well as into one hypertext document. This is important, since a printable version of an environmental report has to be reviewed by the top management before actually giving it to the public. In summary, we propagate an information system for the management of

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