



VolcanoGasML: A New Way to view your Geochemical Volcanic Gases Data

E. Reiter

2, rue des abeilles, F-57440 Algrange, ereiter@free.fr

Chemical analyses of volcanic gases consist of: location of sampling, date of sampling, identification of the sampling, physical and/or chemical data. Nowadays, these data are generally represented in different formats. All of them are inflexible and machine dependent.

In recent years, the World Wide Web Consortium (W3C) has developed numerous standards and

recommendations for data representation and handling. They reflect the increasingly recognized needs for easy and flexible data exchange. Basically, XML[1] is the center point of these technologies. XML is a markup language and probably the most flexible data representation.

XML becomes the most important method of transferring data between computers. VolcanoGasML is a new format, based on XML, for the chemical analyses of volcanic gases. Its definition is divided into several layers: the first one describes the general information concerning the sample, the second, which is organized in several sublayers, contains the chemical data. .

The VolcanoGasML definition, described in the XSD schema language, is divided into several layers:

- Layer 1 describes the general information concerning the sample. Two of these data are required: the volcano name and the identification number. The rest is optional.

- Layer 2 describes the chemical data. It is organized in several sub-layers (T and pH, major species, trace species, isotopic analyses, ratios).

We develop a XSL style sheet to create an HTML document. This can be viewed in an Internet browser. This XSL allows you to insert in a same XML file data from different volcanoes around the world. Data will appear classified by volcano and date of sampling. A ZIP file containing the XSD Schema, an example of a XML file, the XSL file and an free XML/XSL editor can be downloaded at <http://ereiter.free.fr/VolcanoGasML/VolcanoGasML.zip>.

The next step of our project consists in the development of a new style sheet to create a SVG graph.

References

[1] Extensible Markup Language (XML) 1.0 (Fourth Edition), W3C Recommendation 16 August 2006, edited in place 29 September 2006: <http://www.w3.org/TR/2006/REC-xml-20060816/> (last visited 11/05/2007)