



## **A standard XHTML format to describe earth models and improve their dissemination**

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Earth models, resulting from seismic tomographic studies, are expressed following very different conventions and formats. A potential user must check format descriptions, and often run or code computer scripts and programs before being able just to display the models. This fact limits diffusion and utilization of tomographic results. A standard representation for the exchange and distribution of earth models would therefore enhance the circulation and application of models both by fellow seismologists, and by a broader non-specialist community. Such a representation will not need to be used by tomographers in the calculation and data modeling stages, but only to define an inter-exchange format. This subject has been given consideration within the Research Activity dedicated to defining a European reference earth model in the NERIES project. Several possible data description languages exist – such as the well-established Extensible Markup Language (XML) – that could be used to define such a standard. Capitalizing on ideas from the Microformats web-semantics initiative, we propose a light-weight structure to publish data as standard HTML documents. This has practical advantages over a full-blown XML solution, and does not go against such a generalization, since a well-formed XHTML document is a valid XML one. Such files can efficiently be used both interactively by researchers by means of standard Document Object Model programming, and by batch procedures written in any other programming language. Microformats implement a 'Plain Old Semantic Html' (POSH) approach, based on established conventions on the 'class' attribute of html elements; reusing and expanding their semantics rather than creating one from scratch. Microformats emerge from web-development as a minimal, practical implementation for sharing semantic/structured data. They are proposed, discussed, and developed

through a community wiki. Recently they have been approved by the W3C as a viable solution with the GRDDL project (Gleaning Resource Descriptions from Dialects of Languages). Soon to be released versions of open-source browsers (Firefox) will also provide specific microformats tools. We propose here possible guidelines for a draft description of a standard for the distribution of earth models.