STRAINET: STRESS AND TEXTURE ANALYSIS STANDARDISING INTERFACES

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In October 2007, the `STRAINET going global: STRESS and TEXTURE ANALSIS STANDARDISING INTERFACES' took place. Over 50 experts, not only from the world of neutron scattering but also engineering and computing, expressed the overriding opinion: that of Harmonization. This is the aim of STRAINET, the harmonization of stress and texture measurement at neutron sources to the international level.

The first step is the standardization of data file formats. This is a crucial foundation stone as it has an influence of other important aspects such as, data storage and archiving, instrument control software and data analysis software etc. The format must have, on one hand, a standard structure whilst, on the other hand, have the flexibility to incorporate new and different concepts and parameters as instrument development continues. It was agreed that the NEXUS data file format [1] offers these possibilities. The foundation of such a data file format is effectively also a database that characterizes each instrument which in turn offers a myriad of possibilities. By developing an intelligent interface one can use the NEXUS format/database to: simulate instruments more easily, implement automatic alignment/calibration/collision-avoiding algorithms, suppress artifacts, visually recreate and playback an experiment, allow easy implementation of a measurement standard protocol and create a springboard into the inevitable world of artificial intelligence. Presented here is the status so far before the next STRAINET meeting, due in December 2008 in Sydney Australia.

Reference

[1] Könnecke, M, 'The state of the NeXus data format', Physica B **385–386** (2006) 1343–1345