

PaN-Data & CRISP Harmonization meeting
ZRH Airport
July 28, 2011

Minutes

The aim of this minutes is to give a short summary and collection of arguments presented at the airport meeting at the Radisson Blu hotel of the ZRH airport.

Within recent time, there is an increased interest in user-related IT issues at the European neutron / photon large facilities. There are now at least 5 FP7 and national projects dealing with these topics. Following the PaN-Data proposal also the PaN-Data ODI proposal has been approved and will start in October 2011. As the members of the PaN-Data consortium are essentially all larger European photon and neutron facilities, there is now the unique chance that results obtained will be available to the whole community. Furthermore, the CRISP proposal has also been approved and will start in fall of 2011. Partners of CRISP are the physics oriented ESRFI projects (FAIR; ESRF-UP, ILL-2020, EuroFEL, EU-XFEL). Then there is the NMI3 proposal of the European neutron facilities, which has also been approved. NMI3 focuses predominantly on user access issues for the neutron science community, but there is also a networking component again dealing with user IT issues. NMI3 was also represented at the meeting. The new Cecilia/Elisa proposal of the European synchrotron and FEL facilities to be submitted in the second half of this year is the corresponding project for the European photon science community. An interesting national project is also the High Data Rate Initiative (HDRI) of the German Helmholtz-society including DESY, HZB, ANKA. All these projects include components dealing with user access issues (authentication, remote data and experiment access, publications etc). Because the goals of these activities are very similar, there is a risk of parallel development and double work. Seen in positive light, however, there is now a unique chance to develop the IT tools together for the photon / neutron community and to a quality level comparable to that of other scientific communities. Because of strong synergy effects possible, goals are reachable, which can be much more ambitious than in the case, where each facility works for its own. Traditionally, the facilities are run very autonomously, which has many positive aspects and is certainly part of the reason for their success. The goal of the collaboration is to keep this autonomy as much as possible but at the same time exploit the synergies due to a common approach.

In the first part of the meeting the facility representatives described the current user IT status at their facilities. The presentations confirmed the overall assessment that there is a clear need for cooperative handling of common user IT problems. There is obviously also agreement to a high degree on the high-priority topics (pan-European user identification, proposal harmonization, remote data and experiment access, dealing with full raw-data-to-publication chain).

The second part of the meeting dealt with two specific IT tools. They have been developed historically outside of the PaN-Data and CRISP projects and the question is if they are able to contribute significantly to the main issues raised in these new projects or if one should start from scratch. The Umbrella system has been developed at PSI within

work package 2 of the EuroFEL project in close cooperation with HZB, DESY, MaxLAB, and Elettra. In its basic part, it allows a unique pan-European user identification system (EAA) centered on a hybrid central-local user database. On this basic layer, a bundle of user services is defined (common proposal handling, coaching, social media, remote data access, remote experiment access). Basic layer and the first elements of the list are available already as prototype version. A basic element of the Umbrella is its minimalistic approach and that it is strongly linked to the existing web user office (WUO) systems at the respective facilities. As a proof of principle, the Umbrella has been linked already to quite different WUO realizations (PSI, ESRF), links to the Diamond and DESY are practically ready. Time investment in all cases was of the order of days. The other system is the ICAT system developed at STFC. It allows a trans-facility directory and catalog service and will be an indispensable tool for remote access of data (raw and refined). Combined access to data at Diamond and ISIS is available, a clone of the system is in operation at ILL. The discussion showed that extension of these tools to the requirements within the new projects (PaN-Data ODI and CRISP) is very promising.

In the third block, the projects to be harmonized (PaN-Data ODI, CRISP, HDRI) have been presented. It turned out, that there was indeed a strong overlap between the respective user-IT parts. In addition to this overlap the situation is even more complicated due to the fact that as seen from the EU and the German government the projects have to be autonomous and that additional interdependencies are definitively disliked. As expected, there was no easy solution. The practical way out will obviously be that all elements will be kept in all projects but that weights may be shifted and fine tuned.

The last block was devoted to a detailed discussion. There were no formal votes but it became obviously that for many issues there was practically unanimous agreement:

- All participants agreed that we should continue to collaborate as efficiently as possible. There are very important issues to solve and not dealing with them now would inevitably lead to severe problems in user IT support. It became also clear that an increased effort is necessary to include the management responsables in these activities.
- Priorities at the different facilities may differ in part. Therefore it will be wise to discuss in detail who concentrates on what.
- There may be partially the need for topical work package meetings within the different projects. One should, however, try to go for combined meetings as much as possible.
- There is (and probably will never be) an official mandate for developing the various tools. On the other hand, these new tools have to be agreed on both by users and facilities. This means, however, that these tools have to be so attractive, that they are positively accepted (acceptance by quality). That means, that good show cases will be essential.
- Concerning user authentication, there is a vivid development on all levels. Here we should not try to go for a global solution which includes everybody and everything. The photon / neutron community database is and will be rather

specific and special (e.g. one identity provider, special role for user offices at facilities). The agreement was that one should confine the future federation to the photon / neutron community but at the same time go for efficient bridging to other federations (which will be essential for user friendliness).

- The feedback from the participants was that the present Umbrella version works very satisfactory and fulfills all promises made in the beginning. In its present layout, however, this is only visible to the experts, but to facility management people – who will finally decide on the usefulness of the tool – it is obviously not easy to explain the essence of what are Umbrella and Icat all about. The agreement was, therefore, that within the next months a second-level Umbrella prototype should be developed, which is based on the existing and working test prototype as developed for the EuroFEL project a demo version. This version of the prototype will demonstrate the options and possibilities as offered by the Umbrella system also to facility managers and interested users..
- Concerning meetings, there seem to be different levels to be envisaged:
 - *Standard work package meetings* of the PaN-Data ODI and CRISP projects. There may be in part the technical need for work-package restricted meetings (e.g. startup meetings for PaN-Data ODI and CRISP) , but they should be as much as possible common for both projects (and may be even together with HDRI and related activities in NMI3 and Elisa). Optimum frequency will be several times per year. A potential next meeting could be e.g. as satellite to the PaN-Data ODI meeting in November at RAL.
 - *Project kernel meetings* of those who really develop specifications and / or code. These people will need to meet more regularly and on demand. Frequency will be probably every few months.
 - *General user IT meetings of the CERN type*: these meetings are also very important but concerning the frequency one has to ensure that there is so much development in between meetings, that there is new information to report. Here a frequency of one meeting every year seemed to be reasonable.
- In conclusion, based upon the large attendance, the vivid discussions, and the extremely collaborative spirit at the meeting we will have a good chance to find satisfying solutions for the upcoming challenges.