

SUMMARY OF THE JACoW TEAM MEETING

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Abstract

The Joint Accelerator Conferences Website was set up in 1997 and since that time the website has expanded to include more conferences and the scope of activities of the team has also grown. It was felt that the time was ripe to review the activities of the group and to prepare for the medium term future. Frascati Laboratory kindly agreed to host a meeting of the team which met for two days. A total of 18 people from 13 institutes attended the meeting. This note is a summary of the meeting and its conclusions.

1 PROGRAMME

The aim of the meeting was to review JACoW activities and status and to arrive at a number of decisions and plans for the future. The meeting was based on a number of sessions built around introductory talks with >50% of the total time allocated for discussion. The final session was held in conjunction with the EPAC'02 Scientific Programme Committee which was meeting in Frascati immediately after the Team Meeting.

There were three half day sessions which covered the mechanisms of JACoW, conference reports and future plans and finally, technical topics and an analysis of trends in electronic publication for accelerator conferences. The final working session also included a report about eConf¹, an archive for the proceedings of scientific conferences in High Energy Physics and related fields based at SLAC.

In the following sections the various sessions of the workshop are described.

2 CONFERENCE REPORTS

2.1 EPAC 2000

W. Mitaroff (HEPHY) gave a detailed report on the activities in Vienna concerning the networking, hardware infrastructure, software installations and the human resources involved. In his conclusions he pointed out a number of problem areas which should be thought about for future conferences. Firstly, many of the computers for use at the conference were loaned or leased and they were only available a short time before the conference and this meant that time for installation and testing was greatly reduced. He underlined the necessity to respect the ISO-9660 standard when preparing the CD-ROM since this had delayed production. The logistics of transporting systems to the conference venue and back again for post conference processing

was also discussed since it is an area which consumes a lot of resources.

2.2 LINAC 2000

Heath O'Connell (SLAC) reported on the production of the proceedings for LINAC 2000 which was first published on eConf. He explained that eConf is based on a system started by High Energy Physics (HEP) theorists which was implemented as *eprints* at LANL (Los Alamos). It was possible to submit LINAC 2000 papers to the LANL system ahead of the conference and around 60% of contributors did this. There are some features of the eprint system which are more restrictive than JACoW, for example, there is a limit of 650 kbyte on the size of the files submitted. On the other hand, some aspects are more open e.g. papers can be submitted as \LaTeX files or PostScript.

At SLAC the eConf system has all of the files locally irrespective of whether they have been submitted to LANL or not. The proceedings are inserted in a system which has been implemented using the SPIRES database language. There is no control over the layout or format of the papers submitted to this system and although LINAC 2000 used the JACoW templates the resultant PDF files were not cropped.

3 PLANS FOR FORTHCOMING CONFERENCES

3.1 PAC'01

Peter Lucas (FNAL) gave an overview of the strategy for proceedings production for PAC 2001. The team have built on the systems which were created for PAC'99 using web-based interfaces on top of an Oracle database. Greater use will be made of the database and even the files, which all have to be submitted by FTP, will be stored in the database.

An innovation at the conference will be the provision of internet access at poster presentations. Authors have been asked if they would like this facility and will be provided with a connection if they require it. In order to fit with the *village system* where papers from institutes are grouped together in the poster sessions, there will be some posters in the 'internet' area which do not require access but there are sufficient equipped poster areas available that this is not a problem.

3.2 ICALEPCS'01

Heath O'Connell also reported on behalf of ICALEPCS'01 which will be organised from SLAC. He explained that

¹<http://www.slac.stanford.edu/econf>

the current plans were to follow much the same lines as LINAC 2000. The abstract submission however, is being made directly to the conference and not through LANL.

3.3 EPAC'02

Terry Garvey (LAL) described the plans for the proceedings offices infrastructure in Paris. He explained that the plans were in the very early stages but that it was intended to build on the experience gained in Vienna. The basic setup will be very similar to that of previous EPACs but he pointed out that there could be a shortage of setup time since access to the conference venue was restricted ahead of the conference.

John Poole (CERN) reported on plans for the activities at CERN for the next conference. He explained that the database would be fully implemented in Oracle and he was hoping to benefit extensively from the developments made for PAC. He underlined his belief that it was important to publish the proceedings as quickly as possible and presented a challenging schedule for this. He also stated that the question of the necessity to produce paper and CD versions for EPAC would be re-examined.

3.4 LINAC'02

In Soo Ko (Postech) reported on the plans for LINAC'02 which will be held in Kyongju which is situated in the South East of the Korean Peninsula and about 30 km from Pohang. He presented the tentative schedule for the conference organisation and the informatics infrastructure. He explained that registration for the conference will open in February 2002 and the abstract deadline will be at the beginning of April 2002. This is the first time that they will be hosting an accelerator conference and they will build on knowledge gained from APAC'01, PAC'01 and ICALEPCS'01.

4 TECHNICAL REPORTS

4.1 Templates

Sara Webber (FNAL) presented the recent developments which she has made to the MS Word templates for PAC'01. She explained that the main aim had been to make use and compliance with the styles, easier for the authors. To this effect there have been some changes in the wording of the text and help file but the major change has been the incorporation of macros for the application of JACoW styles. These modifications have been implemented through a .dot template. Users have the possibility to apply styles directly to text using a new menu called *JACoW Styles and Macros* which automatically appears in the application.

The new templates also include a work around for the problem of putting footnotes on the first page. In Word 97 for PC there was a problem which generated formatting errors if one used Insert-Footer. This feature is still present

in Word 2000 and also in some Mac versions and therefore an alternative method is necessary. It was pointed out that the automatic numbering features had not been implemented in the new templates because it is felt that authors are not expert enough to handle this feature without difficulty. Experts can of course, turn on the feature manually.

Some changes were also suggested for the L^AT_EX templates but these were still under investigation at the time of the meeting.

5 DEVELOPMENTS IN PROCESSING

Leif Liljeby (MSI) presented some interesting new applications which should make proceedings processing easier. PitStop 4.5 (Professional) has some new features which can be useful (font substitution in figures, changing linewidth zero to something which works and downsampling of huge figures). In the discussion it was noted that L^AT_EX users should use the -j0 option to ensure that fonts are not subset in the postscript file. It was also noted that there is a possibility to downsample huge figures using PitStop and that in another plugin to Acrobat, Gemini, one can export figures and make bitmaps of huge vector graphics. Gemini also allows the export of tables and text into RTF, something which could be useful for extracting Abstracts from PDF files.

Another plugin to Acrobat which he described was Impress, which can be used to apply page numbers and other text to PDF files. This could be very useful to JACoW but the current version has some problems with placing text/page numbers. The manufacturers have promised to modify the next release so that the text can be positioned with respect to a crop-box which is the type of feature needed by JACoW. Finally Leif pointed out that there was a new version of Acrobat, 5.0, which has just been released and it appears that several of the features of the plugins mentioned above have been incorporated in it. He added that there is a greater batch mode capability

Pascal Le Roux (CERN) presented a method to generate index files for proceedings in an automated way from the database. In the past it was necessary to use different processes for the different versions (paper, web and PDF). The new technique uses a feature of Word which allows one to preserve hyperlinks across different document types. It requires Adobe Acrobat to be installed and uses the PDFMaker plug-in. An HTML file is generated from the database, imported into word and then these new features are used. The technique was described in the EPAC 2000 Post Mortem report [1].

6 eConf and JACoW

Gerry Jackson (FNAL) examined the question "What is eConf and what does it mean for JACoW?". He explained that there were a large number of similarities as well as a few conflicts between eConf and JACoW. The basic objectives of the two systems are very similar but they started out

targeting different audiences - eConf for HEP and JACoW for Accelerators. Both sites offer access to full text versions and feature search facilities. JACoW permits boolean searching of full text as well as the hidden fields in the PDF files whilst eConf is based on searching in the SPIRES database.

It was agreed that the two systems are not incompatible and that it would be advantageous to both to improve links between them. JACoW is now a fairly mature system but some of the additional features available in eConf would be useful. Of particular note was the possibility of searching for citations in SPIRES which is important in the academic world in the USA. It was also felt that linking the two systems would provide a wider availability of JACoW proceedings.

The team agreed that some information from JACoW would be loaded into eConf so that searches on title, author and keywords through SPIRES would be possible. Searching for citations is more difficult to implement and it was agreed to investigate the possibilities further and to review the situation during PAC'01. The proceedings of LINAC 2000 require some work before they conform to JACoW standard (hidden fields to be inserted and pages cropped) but it is hoped to complete this work in the coming months.

7 TRENDS OVER FIVE YEARS OF e-PUB

Martin Comyn (TRIUMF) reviewed the development of electronic publication of accelerator conferences since it started five years ago. The size of the conferences in terms of attendees and number of papers published has remained roughly constant. Through the efforts of JACoW and other international collaborations there has been a convergence in the abstract and paper submission methods, use of database management systems and templates. This convergence has made the preparation of papers simpler for the authors and has made the production of electronic proceedings more efficient.

The fraction of authors using PC's is increasing in Europe and the number using Macintosh is decreasing everywhere. Only a handful of authors do not use MS Word or \LaTeX although the number of different versions of these products remains high. Over the years authors have improved the quality of the electronic files which they submit and the software tools available to editors have evolved. Problems which may have taken many hours to fix in the early days can now be resolved rapidly using the new software tools.

As more software tools become available to the editors so do new packages for authors to generate their graphics and this is a source of new problems for each conference. A typical example of this is the increase in computing power which now allows tracking programs to be executed much faster and thus vectorial plots from tracking over millions of turns/steps are easily generated. One problem facing JACoW from these is that the figures can be very slow to

display and it is hoped to be able to offer advice and procedures to authors on how to produce a graphic which looks exactly the same but which displays instantly.

There are some perennial problems and a few ideas were discussed in order to address these.

- a blacklist of authors who persistently submit badly prepared files. These would be targeted for special 'education'.
- use of the wrong templates - stabilise the templates.
- authors who do not read the instructions and cause hours of work for the editors. Use of the brown dot for author feedback. In the same vein, some authors produce really excellent work and they deserve some credit so perhaps gold stars might be used as well.
- \LaTeX installations at institutes and conference venues. This problem can be solved quite easily and continued pressure will be maintained by the author of this paper !
- author education - more could be done at the conferences to help authors fix their papers whilst they are on the spot.

Whilst these problems persist, the success rate for processing papers has been steadily improving and seems to be approaching an asymptotic value of around 20% failure rate. Improvement beyond this value will be difficult because there will always be new authors and new software and therefore new problems for each conference.

Martin ended with some speculation about where electronic publishing could be heading and pointed out that a new medium - DVD - is becoming widely available with much greater capacity than CD-ROMs. In the long term XML looks to be an important language and it will have significant possibilities for electronic publication- this subject was first discussed at the JACoW Workshop² in a presentation by Michel Goossens.

8 THE FUTURE OF JACoW

Christine Petit-Jean-Genaz (CERN) presented a short review of the development and activities of JACoW. She pointed out that since it was first set up in 1997 for EPAC and PAC, many more conferences have joined and the activities of the group now cover a wider field than web publication. Through an international collaboration in electronic publication a team of experts has been built up and they have been responsible for the processing of files for the conferences and the proceedings production.

It was underlined that the website is based on a single source (at CERN) for all of the files which make up the proceedings of the contributing conferences. This site is mirrored at other sites around the world. The papers are in PDF files containing hidden fields which are used to provide one of the essential features of the site - boolean searchability. The website is also used to provide information for authors

²see <http://cern.ch/AccelConf/workshop99/Proceedings/Proceedings.html>

(guidelines and help) as well as templates which are shared by all of the conferences.

The activities of the group have developed to cover all aspects of the life cycle of the conference proceedings from abstract submission, to templates, to activities at the conference and finally publication on all three media (paper, CD and Web). Apart from the publication activities the team is also involved in author education and development of new processing techniques. These activities are therefore much wider than was initially envisaged for JACoW but it was agreed that they are a fundamental aspect of the group's work.

The team agreed that in order to benefit from the experience of the 'current' conferences and to prepare the next, it was very useful to meet once per year outside of the conferences themselves. The pressure on the team at the conference is such that there is no time to fully explore technical developments or to discuss plans for the future. The conferences do however, offer a good opportunity to provide feedback to the Organising Committees and Programme Chairs. It was therefore proposed that the steering committee should meet at every EPAC and PAC and that the team would meet once per year, towards the end of the year.

Requests from LINAC, Cyclotron and ICALEPCS to join JACoW have prompted the preparation of a new charter which defines the aims of JACoW as:

- Publication of proceedings via the web
- Collaborative development and preparation of templates
- Life cycle support for proceedings publication
- Regular meetings of the Steering Committee at EPAC and PAC and annual Team meetings

The document also defines the conditions for membership of JACoW and basic functionality as:

- each conference agrees to produce conforming files (through their editors) and is responsible for the maintenance of their own proceedings
- conferences may publish in other forms and they are free to have their own look-and-feel in the presentation of the proceedings
- the central repository is maintained at CERN
- JACoW site hosts agree to provide and maintain all necessary hardware and software to provide the full functionality of the primary site
- each conference agrees to adhere to the standards required for publication on JACoW and to participate in collaborative exercises for the selection of software and standards

This document will be presented to the various organising committees and programme chairs for their approval.

9 ACKNOWLEDGEMENT

I would like to express my thanks to the local organisers (Maria Rita Ferrazza and Pina Possanza), the host labora-

tory and in particular its director P.F. Laurelli and all of the speakers and the participants for their efforts which made the meeting such a success. Finally I would like to thank Christine Petit-Jean-Genaz for all of her work in the preparation of the programme.

10 CONCLUSIONS

The meeting once again demonstrated the enthusiasm of the team to produce a highly useful and professional service to the accelerator community. A lot of useful knowledge was shared and this will be used immediately in the forthcoming conferences and some interesting new ideas were also developed (new software tools, links with eConf etc.).

JACoW has established itself as a useful resource for the accelerator community and should continue to be supported by the conferences. Since its inception JACoW has built up a team of experts in fields which cover the whole life cycle of proceedings production and thanks to them the project has been and will continue to be successful. The rather loose charter which was drawn up in 1997 has been re-written with a view to formalising the current activities of the group and to ensure the continued support for their work.

11 REFERENCES

- [1] P. Le Roux and J. Poole, "Post Mortem of the Electronic Publication of the EPAC 2000 Proceedings", CERN SL-Note-2001-007 MR, February 2001.