

JACoW CHAIR REPORT TO STAKEHOLDERS 2020

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Abstract

The COVID-19 pandemic has heavily affected the context of Scientific Conferences and JACoW is no exception. The annual Stakeholders Meeting usually takes place at the current IPAC but since this year's conference had to turn to a virtual conference the meeting could not take place.

In this document the JACoW Chair reports on the status of the Collaboration highlighting what has happened during the last year and what to expect in the coming months.

A LONG TIME AGO IN A GALAXY FAR, FAR AWAY

In the mid-nineties, with the arrival of electronic publication, PAC'95 and EPAC'96 were the first accelerator conferences to try their hand at publishing proceedings themselves. The proceedings of EPAC'96 were published at CERN a few months after the event. Ilan Ben-Zvi of Brookhaven National Laboratory, scientific programme chair of the coming PAC'99 conference, approached the editors of EPAC'96 and proposed that PAC proceedings be published at the same site. The organizers of the first Asian PAC, APAC'98, then in preparation, decided to join the venture.

In 1997 the JACoW Collaboration was created: today JACoW hosts the proceedings of 18 different conferences: BIW, COOL, CYCLOTRONS, DIPAC, ECRIS, FEL, HIAT, ICALEPCS, ICAP, ICFA Advanced Beam Dynamics Workshops, IPAC, LINAC, MEDSI, NA-PAC, PCaPAC, RuPAC, SAP and SRF [1].

ACTORS

JACoW is a not-for-profit international collaboration for the electronic publication of accelerator conference proceedings. It operates with an official team that does the bulk of the work and a Board of Directors that guides and manages the Collaboration and reports to Stakeholders at their annual meeting.

Stakeholders

The informal definition of JACoW Stakeholders could be thought as "everybody interested in JACoW activities". Its composition basically includes the JACoW Team, the Board of Directors, the Conference and Institute Representatives and, of course, all the conference proceedings users.

The Team is composed of persons responsible for carrying out the work of the Collaboration, which basically means Editors in Chief and Scientific Secretaries of every JACoW conference in a three-years cycle (i.e., past, current and future conferences) plus a group of co-opted experts in various fields related to

proceedings production (covering the areas of web hosting, programming, content management, information technology, conference management, and many others) [2]

The Board of Directors The Board of Directors is the managing body that monitors operation of the Collaboration and is the deciding authority concerning operations and development/changes to the Collaboration and its activities. Its current composition, with years of mandate, is as follow:

• Ivan Andrian, <i>Chair</i>	2018-2020
• David Button, <i>Deputy Chair</i>	2020-2022
• Christine Petit-Jean-Genaz, <i>Coordinator</i>	2018-2020
• Johan Olander	2020-2022
• Regis Neuenschwander	2020-2022

Conference Representatives are the key persons ruling each conference; usually, Scientific Programme Chair, Organising Committee Chair, Local Organising Committee Chair, etc.

Institutes Representatives - JACoW is a collaboration of people normally supported by laboratories and institutes in the accelerators community. These institutes contribute to the Collaboration in many ways, from covering the costs of travel for JACoW Team members to providing IT infrastructure for SPMS, Indico, webservers, file servers and Oracle licenses, not to forget the time of developers dedicated to JACoW tools. It's important to name some of the major contributors in this area:

- CERN, *Indico-SPMS merge project, webserver, Oracle*
- Fermilab, *SPMS development and Oracle*
- KEK, *Oracle*
- Jefferson Lab, *fileserver*
- PSI, *fileserver*
- Elettra, *webserver*
- ANSTO, *Cat Scan Editor Tool, and JACoW Reference Search & Generation Tool*

End Users are part of the community that benefit from the proceedings generated and published on our websites – since they are our "clients" their voice is important.

PUBLISHED OPERAS

Since last Stakeholders Meeting 8 new sets of proceedings have been published: IPAC'19, COOL'19, FEL'19, HIAT'18, SRF'19, CYCLOTRONS'19, ERL'19, IBIC'19.

Looking at the trend of proceedings published per year (Fig. 1) this represents a decrease in number from previous years: the main reason is related to COVID19, but other factors will be presented later in this report.

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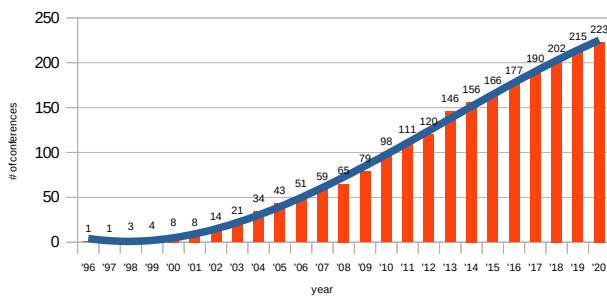


Figure 1: Published sets of proceedings.

THE (APPLIED) FORCE

Each JACoW Editor-in-Chief undertakes a set of “ordinary” activities such as: forming an editorial team, setting up the IT infrastructure, communicating, editing papers, producing the final proceedings and so on. However, a number of specific activities require a different focus and effort, and to this end members of the Team participate in Working Groups. Since the last JACoW Team Meeting in 2019 in Santos Brazil, they are the following:

Templates this working group follows the evolution of the official JACoW templates according to new trends in electronic publication, requests from our users, technical needs from related services like articles archives and indexes (e.g., arXiv.org, SCOPUS, Google Scholar etc.) [3]

Website content is the group of people responsible for the update and coordination of the information on the JACoW.org website. The aims are to have always recent and updated instructions, reports, easily findable in order to speed up the work of team members active in conference organisation.

Indico-SPMS merge The CERN Accelerator Department-funded 3-year Indico-SPMS merge project to introduce SPMS functionality into Indico (in particular with respect to the editorial module) finished end 2019. For various reasons the project accumulated certain delays. The Working Group is due to begin testing in the coming months. It will provide feedback to the Indico developers for any needed modifications to the code (see further in this report).

IT integration includes all the techniques and tools for a good IT setup for paper editing and the development of tools to integrate the existing scripts and services with Indico (file upload/download, online paper checking, mobile app, Reference Search and Cat Scan Tool, etc.)

JPSP the JACoW Proceedings Script Package is a set of Perl scripts developed by Volker Schaa that process the PDFs edited by the Proceedings Office according to the metadata present in the SPMS to produce the final files of the Proceedings. Constant development of the scripts is needed and, with the transition from SPMS to Indico, it has been decided to rewrite this package and integrate it with Indico directly as a plugin [4].

Team Meeting organisation every Team Meeting is like a small conference that follows similar protocols and procedures. This working group can be thought as the Scientific Programme Committee plus the Local Organising Committee of a typical JACoW conference.

THE PHANTOM MENACE

For many years now the JACoW Board of Directors has performed a yearly risk analysis to foresee weak areas with respect to the running of JACoW’s aims [5]. Despite our efforts, we have not been able to mitigate new challenges. In fact, this last year has seen a significant increase in problems negatively affecting the sustainability of the Collaboration, and in particular the support offered by the Team to Editors, the support of certain Institutes for the Collaboration itself, the ability to renew the membership of the Board of Directors, the development and maintenance of tools.

Termination of FNAL JACoW/SPMS Support

The SPMS has been mainly developed by Matt Arena of Fermilab since the early 2000s. It was clear that the time he was able to dedicate to this task was constantly decreasing over the years. When the time officially allocated by FNAL to SPMS support dropped to zero, Matt continued maintaining the code and supporting the existing instances at the three Regional Support Centres (FNAL, CERN, KEK) in his own time.

In mid March 2020 the JACoW BoD was notified that Fermilab management had decided to completely discontinue support for SPMS. Development hence officially froze from that time on; nevertheless, Matt promised to follow any needed bugfixing in a best effort way in his own time. Oracle support for any existing SPMS instances at FNAL also ceased: by the end of May all “active” SPMS instances (i.e., for conferences still running) had been moved to KEK (JACoW is indebted to the KEK management for agreeing to take over the SPMS Americas instances) and completely removed from the FNAL servers.

Need to Reprocess Old Proceedings

Following requests from the accelerator community, JACoW in recent years made huge efforts to improve the quality of references in JACoW papers. Having well-formatted references, including DOIs, eases the cross-referencing between articles by way of good indexing. Adding a Light Peer Review process for IPAC also enables journals to get a recognised impact factor from these citations [7].

To access some abstract and citation databases like SCOPUS, however, it is necessary that the proceedings satisfy several additional requirements, e.g.: they need to have an Ethics Statement, ISSN numbers must be assigned to proceedings and present on every page of the articles, together with DOI numbers, etc.

While all newly published sets of proceedings now satisfy these requirements, the community requested that

all **previously** published sets **also** be submitted to SCOPUS, implying re-processing of the previously published sets to add new metadata. This process is time and resource-intensive, and, unfortunately gives rise to several bottlenecks.

Bottlenecks (Single Points of Failure)

JACoW risk analyses have, over the years, constantly drawn attention to the high risk of single points of failure related to tools development and maintenance.

The highest risk was probably related to the SPMS: the current situation following the withdrawal of FNAL support has transformed a simple risk into a real damage to the community. All past SPMS instances hosted at FNAL were not been migrated to KEK. Without access to these instances it is not possible to reprocess the PDF files, meaning that these instances must be moved (perhaps to join the “active” ones already migrated to KEK), if they still exist somewhere on FNAL servers. The SPMS code then has to be updated to the latest version to be consistent with the latest JPSP scripts.

The second highest risk concerns the JPSP scripts themselves: this package was originally developed and has been maintained by Volker Schaa who, despite his retirement from GSI has fortunately for JACoW been able to continue to be actively involved in the Proceedings Offices of most JACoW events. He is not the only person able to run the JPSP scripts, but he is surely the person that uses them most often. In recent months however, Volker had to undergo surgery that prevented him from using a computer for a significant period of time. This slowed down the production of several sets of proceedings and brought to a halt the re-processing of old ones (to bring in line with SCOPUS, etc.).

Indico-SPMS Merge Still not Complete

The 3-year project financed by the CERN Accelerator Department finished end 2019. The Indico development team completed the implementation of the basic requirements for JACoW in version 2.3, with a stable release available only in early September 2020. An alpha version of 2.3 should have been tested at FEL'19 but it was not ready in time. A beta version was to have been tested during the first half of 2020, but this failed due to several delays caused by COVID-19. A joint test by JACoW and Indico people is due to start soon, but this may now be too late for adoption of the tool as hoped for 2021 conferences which would normally open abstract submission end 2020. The future development of JACoW-related features will be discussed probably during the coming tests.

Impact of COVID-19

JACoW Virtual Events IPAC'20 was the first JACoW conference to experience the catastrophic effects of this pandemic. The LOC reacted promptly and pulled off a successful Virtual Online Conference. All 2020 JACoW conferences either became virtual, or were postponed to 2021 or later. It is still unclear how some of

the conferences scheduled for the coming year will take place: either real, virtual or a mix of the two.

Due to the practical impossibility to travel abroad for most of the JACoW Team, the JACoW 2020 Team Meeting (Bangkok) has been postponed to end 2021 at a venue still to be decided. This has a huge impact on JACoW: the training of newcomers usually takes place during conferences and Team Meetings; remote editing of two virtual conferences has proven to be very difficult, prone to errors and poorer quality proceedings, despite a greater investment in time and manpower. Continuity in the education of editors, IT issues and Scientific Secretaries is at high risk.

JACoW Management Two key Board of Directors roles were scheduled for election this year: both the Chair and the Coordinator are ending their second three-year mandate, meaning they cannot be re-elected in that role. Finding volunteers willing and able to stand for election to these positions has proven difficult. Elections normally take place during the yearly Team Meetings, meaning that this year we will not be able to arrange a ballot in presence. In theory, according to the JACoW Charter, an electronic vote is possible. However, due to the uncertainty of the present times, and a lack of candidates, as well as the difficulty to organise a remote election, the Board of Directors has decided to exceptionally extend the mandate of these two roles for one more year. The elections will now take place at the 2021 Team Meeting. Hopefully there will be enough time to find good candidates and setup a real ballot.

THE ALLIANCE

JACoW and the wealth of knowledge within its 223 published sets of proceedings featuring over 68,000 individual papers freely available to users and stakeholders has been gradually amalgamated over the last 24 years. It is with the considered foresight, and innovation of those stakeholder and team members past and present that JACoW has been able to succeed and continue to innovate and deliver ever greater quality proceedings which stand strong in the e-Publishing domain.

Electronic publication is largely a technical process, using numerous software tools and bespoke systems. The importance of the good will and technical skills and minds of those contributing to the JACoW team effort to reach the current status cannot be overstated.

As we listen to the feedback from our stakeholders and consider recent innovations and milestones aiming to improve recognition for those publishing on JACoW, as we move towards the merger of SPMS to Indico, and as we create even more efficient tools to process papers, the importance of the contribution and support provided by the community at large is even more more vital for the continued success of the JACoW Collaboration.

Just as JACoW Stakeholders showed their support during the early days of the Collaboration, that support is even more vital today to ensure the sustainability of

JACoW, to provide assistance in the management of conferences, to preserve knowledge in archived proceedings, to gain recognition for contributions, and to provide reliable web based open access papers within the various fields of accelerator science and technology. Declining support in some areas is putting JACoW's sustainability at serious risk. A number of original members of the Collaboration who contributed so much to JACoW's success are retiring, and successors are not easily found to take their place. JACoW cannot continue to meet its aims without the full support the its Stakeholders and the community at large.

CONCLUSIONS

We are living in interesting times, indeed, respecting the well known Chinese curse. The COVID-19 pandemic changed our lives in many ways and will surely change our way of meeting at conferences. The need for scientific exchange, for Team Meetings and cooperation, for scientific production clearly is at high levels these days. Conference proceedings in the accelerator field have always been an invaluable instrument for science, so

JACoW's role continues to be of extreme importance. However, as outlined above, many issues now jeopardize JACoW's ability to fulfil its mission. JACoW needs a stronger commitment by conference LOCs and Scientific Institutes, it needs the community's support in the development of existing and new tools, it needs to be able to count on the attendance at Team Meetings of all those persons that contribute to the Collaboration. This is of vital importance, probably more than ever before.

We hope these conclusions will trigger an active discussion among JACoW Stakeholders to find renewed energy to boost JACoW in its third decade.

REFERENCES

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