

Pilot Demonstrates Limited but Useful Expectations

Jan Visser, the Publishing Editor of *Nuclear Physics*, discusses what has been learnt in the first nine months of operating *Nuclear Physics Electronic*.

Nuclear Physics Electronic (NPE) was launched in January by Elsevier on an experimental basis as a free "electronic enhancement" to subscribers of *Nuclear Physics*. The journal is published monthly as *Nucl. Phys. A*, *Nucl. Phys. B* and *Nucl. Phys. B (Proc. Supp.)*, with 15 volumes of 750 pages each year for *NPA* and about 25 similar volumes for *NPB* (in 1995). It is run as a conventional peer-reviewed journal with an editorial staff and an editorial board calling upon referees from a list of about 1500 names. The electronic form comprises contents (past issues and issues in preparation or in press), abstracts (of articles published since 1 January 1993 or about to be published), and the full texts of articles submitted in electronic form that have been either accepted or published (they are available for six months following publication).

Anyone can access the contents and abstracts via World-Wide Web or an email service. Access by anonymous FTP and retrieval by WWW and email is enabled on the basis of a list of network addresses which correspond to subscriptions to *Nuclear Physics*. This is not particularly watertight since people having a dial-in link to an institute which is a subscriber are currently also treated as subscribers.

Judging the impact of the service is difficult because there are some background trends, such as a general increase in subscription prices and a weakening of demand in east and central Europe (ECE) and the former Soviet Union (FSU). According to Jan Visser, the Publishing Editor, the complete range of *NPE* services was used by 100-150 regular users at the beginning, and reached a plateau of about 750 after 9 months. The percentage of users based in ECE and the FSU is smaller than expected on the basis of subscriptions say five years ago. The decreased number of subscriptions for the region (which is being partly offset this year at least by the EPS-INTAS journals programme — see *EN*, August 1994) does not explain the relatively small percentage because access to contents and abstracts is free of charge. Lack of information rather than difficulty of access via inadequate networks is thought to be the problem.

On the Editors' Side...

With regard to refereeing, there is no advantage to authors if a text is submitted as an electronic version since acceptance is based solely on scientific merit. The refereeing system itself tries to be as flexible as possible, and mostly works in the traditional manner with the distribution of paper copies. The sociology of science encourages a large number of referees which, by spreading involvement in a journal, makes good commercial sense. A referee will on average receive 2-3 papers each year. Even assuming that referees are equipped with computers and appropriate systems, it is costly



Marten Stavenga and Roger Poultney of Elsevier Science Publishers demonstrating *Nuclear Physics Electronic* at the 27th International Conference on High Energy Physics (Glasgow; 21-27 July 1994).

and time consuming to ensure that they can print electronic manuscripts without any difficulty. Flexibility thus means sending a referee texts in the preferred form (some 20% of *NPB* referees prefer electronic texts, with slightly fewer for *NPA*).

Referees are often concerned about the confidentiality of reports. Having "super-referees" or associate editors handling say 20 paper each year would make it much easier to ensure security. But even if one can find super-referees at a time when there is widespread reluctance to take on refereeing duties, it goes against the sociology. The result is that *Nucl. Phys.* is not trying to change its refereeing process.

On the Authors' Side...

On the authors' side, the percentage of articles submitted electronically is 80% for

NPA and slightly more for *NPB*, both figures being fairly constant. The editors accept articles in virtually any electronic form because one can nowadays usually get any recognizable file to work. But for direct editing by the journal's desk editors it is necessary to submit text prepared using Elsevier Sciences Publishers' (ESP) TeX macros and ESP-LaTeX document styles or in LaTeX flavours such as the American Physical Society's RevTeX. Plain-TeX files containing user-defined macros generally give considerable trouble. About 50% of electronically supplied articles are in LaTeX so focussing on LaTeX does not limit authors unduly. The percentage is increasing all the time, largely because promotion of the ESP-TeX macro package means that it is becoming a well-distributed standard for regular contributors. There seems to be no clear-cut favourite for the remaining 50%, although commercial word-processors have a surprisingly small share. Elsevier will continue to support ESP-LaTeX, especially now that a Windows version of LaTeX is widely available. Updated EPS-LaTeX document styles are announced from time to time and can be obtained by FTP at <ftp://ftp.nucphys.nl/pub/nucphys/teX/macros>. Authors preferring plain-TeX are asked to use the "article style".

On the Publishers' Side...

The delay from receipt to acceptance is the same for articles submitted both electronically and non-electronically (email message and report handling to speed communications has little impact since the refereeing process itself takes the bulk of the time). Acceptance to publication is slightly faster for electronically supplied articles (down to 15-20 weeks for *NPA* and to 15 weeks for *NPB*) but the change is not as much as expected (the minimum hoped for is 10 weeks assuming no delays resulting from printing schedules, etc.). At the beginning it took longer than expected for the 4-5 desk editors to learn how to set up and edit electronic texts on computer screens. But since electronic submissions dispense with the rekeying of texts, there has tended to be an overall reduction in time and effort.

Edited computexts are uploaded once a week by the editorial staff onto the *NPE* server at the NIKHEF institute in Amsterdam.

Nuclear Physics		
STATISTICS	<i>Nuclear Physics A</i>	<i>Nuclear Physics B</i>
Number of articles received	≈ 800	≈ 620
Rejection rate	≈ 25%	≈ 35%
Number of pages published	11250	18750
Subscription cost	9435 HFL	15400 HFL
<i>NPE</i> *: Departments, etc. with access	= 350	
Number of regular users	= 750	
DELIVERY TO SUBSCRIBERS (contents, abstracts, articles - published & in press)		
World-Wide Web home page at http://www.nucphys.nl		
- browse/download/index search		
Anonymous FTP at ftp://ftp.nucphys.nl		
Files kept in various directories of the type /pub/nucphys/npa/...		
- download		
Email		
- document delivery/index search		
*: <i>Nuclear Physics Electronic</i> ; www.nucphys.nl = 192.87.39.8; ftp.nucphys.nl = 192.87.39.8		

Authors are not provided with proof copies unless they request them. Abstracts of all articles are typeset in the Standard Generalised Mark-up Language (SGML) by the printers and then converted by the desk editors into ESP-LaTeX for uploading.

The future will possibly see some linking of usage to payment and the conversion of the 20% of articles submitted non-electronically into electronic versions to give a truly 100% electronic journal. It is not clear whether at this stage the author supplied articles which have been accepted should be available before publication. They would be, in principle, be available sooner and this could be seen to be unfair. Moreover, they are often already accessible elsewhere via a preprint server, albeit usually in a different form since the publishing process generally adds some value to all texts, and a significant amount to the 50% that are modified as a result of refereeing.

Perhaps the most exciting development is the ability to integrate multimedia simulations

Nuclear Physics Electronic

Further information/help

WWW: homepage at <http://www.nucphys.nl>

Email delivery: email message with "help" in subject line to npa-serv@npe.nucphys.nl or npb-serv@npe.nucphys.nl or npbps-serv@npe.nucphys.nl

www.nucphys.nl = 192.87.39.8

of say an experiment, thereby going substantially beyond what a conventional printed journal can offer. The electronic version will thus remain for the foreseeable future as a complementary but valuable service to subscribers, providing more than say distribution of archived issues on compact discs (CD-ROMs). Some publishers are adopting the latter route, notwithstanding the disadvantage that some of today's CD-ROMs may be unreadable in a few years time if computer operating systems become incompatible with CD software.

ONLINE HOSTS

INSPEC and Physics Briefs to Merge

In terms of the number of databases offered in the field of science and technology, STN International with service centres in Germany (at the Fachinformationszentrum Karlsruhe – FIZ), Japan and the USA is now equal in size to the other largest host of online information (the number of databases will rise from 180 at the end of 1993 to 207 by the end of this year). In terms of the total time users are connected online, STN is the second largest host and is well known to physicists as the supplier of *Physics Briefs* which is produced by FIZ. Following an agreement with the UK's Institution of Electrical Engineers (IEE) to collaborate in the joint production of the *INSPEC* database, FIZ will stop producing *Physics Briefs* as a separate product at the end of 1994. FIZ estimates that it will be contributing about 20% of entries to the enlarged *INSPEC* database (mostly in physics and physics-related topics).

Bernward Jenschke, who is responsible for marketing at FIZ Karlsruhe, says that the decision to merge the two was the main outcome of a project that supplied *Physics Briefs* on-line to about 40 institutes and universities in Germany for a fixed price of DM 4500.– per annum (the three-year project ends at the end of 1994). Physicists have always been interested in the peripheral and

applied fields covered by *INSPEC*, and Germany's physicists felt that it was pointless to continue operating two databases that had a large number of duplicate records (about 60% for the 1990-91 period — equivalent to about 80 000 records each year). The plan is to run a duplication check on the online records of *INSPEC* (which began in 1969) and *Physics Briefs* (which began in 1979) and to transfer non-duplicates to *INSPEC* by the end of this year. From then on only the enlarged *INSPEC* database will be produced.

The IEE has not yet decided if the fixed pricing scheme will continue in Germany (it seems likely that it will, at least for the pilot group of physics institutes, but an indication of the price is not available). Other institutes as well as centres elsewhere pay according to usage, with academic sites benefiting from an 80% reduction. The trend is clearly towards fixed pricing and STN's main difficulty is to obtain the agreement of all its approximately 60 database suppliers so that universities and the like can be offered a fixed price for a package comprising the complete set of 207 databases. The preferred model (which is already operating for a mathematical database) is to offer a fixed price for online access, and to charge a small supplement for the printed version (it would come with a compact disc version).

Commenting on the impact of new technology, Dr. Jentsche felt that STN could offer browseable, user-friendly databases via Internet (possibly using World-Wide Web) which handle graphics and complicated formulae. The problem is that while the lines into Karlsruhe have been upgraded recently to 1 Gbyte/s, most institutes (and industry if it is connected) are still working at 9.6 kB/s. The increased availability of ISDN lines working at 64 kB/s does not greatly improve the situation as it will still take a minute to download a useful image. The only effective solution is a general improvement in networking capacity.

STN celebrated its 10th anniversary last year.



JOURNALS & PROCEEDINGS

Classical & Quantum Gravity Goes Online

Classical & Quantum Gravity published monthly has gone online as a 100% electronic journal in the sense that articles which are not submitted in TeX or LaTeX are converted by the publishers (IOPP). Anyone can browse tables of contents and search a database of articles via the IOPP WWW homepage at <http://www.ioppublishing.com> where www.ioppublishing.com = 193.131.119.1. There are a few hundred subscriber sites whose staff have access authorisation based on Internet addresses. Registered users can download TeX or LaTeX files and figures in GIF or Encapsulated PostScript (EPS) formats. If your institute subscribes to the journal you can register as a user by filling in a form available by anonymous ftp at <ftp://ioppublishing.com/pub> (where <ftp://ioppublishing.com> = 193.61.87.2). Telephone +44-117-929 74 81 or email to custer@ioppublishing.co.uk for information.

US Plans Well Advanced

The July/August issue of *Computers in Physics* published by the American Institute of Physics (AIP) describes how the AIP's *Applied Physics Letters* will be available online in January 1995 as *APL Online*. It will use the Online Computer Library Center's EJO server system and the Guidon client software adopted by *Electronics Letters Online* (subscribers will be mailed a copy of Guidon for PC, Mac or X-Windows). Texts will be translated from files generated in a proprietary format by AIP's established in-house electronic composition system to Standard Generalized Markup Language (SGML) tagged files using the ISO12083 Document Type Definition standard that has been endorsed by EPS, AIP and the American Physical Society (APS). Line figures will be in TIFF and photos in the Joint Photographic Experts Group (JPEG) format.

ISO12083, hitherto available as a draft, has been released very recently (contact national ISO agents for information) as a definitive standard as a printed version. A diskette version is planned. This will be the first time that the International Standards Organization has provided a diskette.

The much-heralded launch by the APS of *Physics Review Letters Online* has been delayed by a few months to mid-1995. There will be two server sites providing user access and documents will be SGML-tagged. The Optical Society of America (OSA), which is collaborating closely with the APS and the AIP, aims to have early notices (25 pages abstracts) of all articles published in OSA journals available via Internet. It is also looking at putting *Optics Letters* online. ➤

Classical and Quantum Gravity

INTERNATIONAL JOURNAL OF OPTOELECTRONICS

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