CERN Bulletin

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WEB@30: RELIVING HISTORY AND RETHINKING THE FUTURE

Thirty years ago, an unimaginably powerful tool was invented by Sir Tim Berners-Lee here, at CERN

The first panel discussion with Frédéric Donck from Internet Society, Tim Berners-Lee, web pioneers Robert Cailliau, Jean-François Groff and Lou Montulli, and writer Zeynep Tufekci. (Image: CERN)

Thirty years ago, an unimaginably powerful tool was invented by Sir Tim Berners-Lee here, at CERN. Initially conceived as a means to share scientific information, the Web grew into an essential technology for progress. Today, we are celebrating it with a globally webcast event.

"The Web has been an incredible and powerful tool to reach out to the whole world, to break down barriers, to bring education and information to all and thus to reduce inequalities," said Fabiola Gianotti, CERN Director General in her opening remarks.

Looking at the early days of the Web, a panel discussion titled "Let's Share What We Know" recalled the stages Sir Tim Berners-Lee's proposal underwent before becoming the Web we know today. Frédéric Donck, Chief Regional Bureau Director for Europe for Internet Society, moderated the discussion between Berners-Lee, web pioneers Robert Cailliau, Jean-François Groff and Lou Montulli, and Zeynep Tufekci, techno-sociologist and writer.

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A WORD FROM MARTIN STEINACHER

FUNDAMENTAL RESEARCH: AT THE HEART OF INNOVATION

The World Wide Web is certainly the best-known innovation to have emerged from CERN, but it's far from being the only one. That's because fundamental research plays a vital role in the process of innovation. At an institution like CERN, innovation takes many forms: technological, of course, but also intellectual and social. Consider the latter. Ever since CERN was established, working across cultural boundaries has been the norm. That's why people of over 100 nationalities can work harmoniously and peacefully here, and it's why an inclusive working environment is so important.

(Continued on page 2)

In this issue

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A WORD FROM MARTIN STEINACHER

FUNDAMENTAL RESEARCH: AT THE HEART OF INNOVATION

Our Code of Conduct, the Diversity Office and the Ombud are just a few of the resources that serve to protect and promote diversity and inclusivity at CERN. Initiatives such as these belong every bit as much to the realm of innovation as the World Wide Web, and they're intrinsic to the world of fundamental research.

Our international nature, along with scientists' love of meritocracy and disdain for hierarchies, has led to the innovative management structures you see at CERN, particularly in the large experiments, and it has also fostered the culture of global collaboration in particle physics that is so rare in other walks of life. In which other field would rivals share innovative ideas with their competitors? In the 1950s, scientists from Brookhaven National Lab in the US did just that when they came up with a technique for increasing the energy of a particle accelerator and shared it with CERN. A decade later, it was the turn of the Europeans to lend a hand when the nascent National Accelerator Laboratory, now known as Fermilab, was building up its accelerator complex in the US. Such exchanges are common in fundamental research because it's the goal that counts most. Today, you need look no further than CERN's contribution to DUNE in the US, and the US contributions to the LHC, to see that this spirit of collaboration is alive and well.

Intellectual innovation is perhaps just another way of saying research. It's something that we nurture at CERN through a wide range of training programmes to develop human capital. Intellectual innovation manifests itself in myriad ways, from some scientists devising new algorithms to refine their analyses, to others refusing to accept the answer "no". When the tools don't exist to tackle the research question at hand, scientists tend to develop them. To take an example from CERN, such perseverance has contributed much to medical applications over the decades.

The social and intellectual innovation that you find at CERN both contribute to technological innovation, and they helped to make CERN fertile ground for Tim Berners-Lee's ideas thirty years ago. Then as now, CERN was a place at the cutting edge of technology. The Lab had the Internet, and many had computer workstations on their desks. The social structures at CERN allowed Berners-Lee to develop his ideas, and the culture of openness allowed CERN's Management to make the Web available to all for free. It's the same culture that allowed CERN to have a touchscreen-operated control system for the SPS in the 1970s, and to foster the development of technologies in fields ranging from aerospace to cultural heritage.

At CERN, it has always been like this. One important thing has changed, however, since the invention of the Web. We now have a formal Knowledge Transfer (KT) group at CERN, which has the task of identifying emerging technologies and ensuring that they not only serve the needs of research, but also go beyond the lab and into society as innovative solutions to contemporary problems.

When Tim Berners-Lee wrote a proposal for what would become the World Wide Web, few really understood where it would lead. Berners-Lee certainly had an idea – when he wrote the world's first web browser in 1990, he named it "worldwideweb" – but to many of those around him, the early Web's potential was not immediately obvious. Nevertheless, CERN allowed him to develop his vision, through a combination of his persistence and his supervisor's recognition of a bright idea, but that was not until 18 months after the initial proposal was made. One can only speculate what might have happened had CERN had a KT group at the end of the 1980s. My feeling is that the end result would have been the same, but that we might just have got there faster. While it's not the role of the researcher to recognise the potential of an innovation, that's precisely the kind of expertise our KT group brings to CERN.

You could argue that the Web could have come from anywhere, and indeed the time was right for such an innovation, yet it's no accident that it came from CERN. Few areas of human endeavour have an ecosystem that combines cutting-edge technology, intellectual rigour and a culture of openness to the same degree as fundamental research. That's why places like CERN will always be at the heart of innovation.

Martin Steinacher
Director for Finance and Human Resources

WEB@30: RELIVING HISTORY AND RETHINKING THE FUTURE

A discussion between Bruno Giussani, Global Curator of the TED conferences, Chair of the Geneva International Film Festival and Forum on Human Rights and Sir Tim Berners-Lee addressed the dangerous paths the Web has taken since its birth and proposed ways to "fix" it, by bringing it back to its original democratic ideal, where each one can freely generate and access content, and keep ownership of their data.

"Half of the world's population is connected today, but we've got to step back and look at it, fight for Net Neutrality, free speech, privacy, and owning control of your own data. We should also make sure it doesn't take another thirty years to get the other half of humanity connected," said Berners-Lee. He then presented his plans to re-decentralise the Web with the Solid project for improved privacy and full data ownership, and also the Contract for the Web, targeted at governments, companies and citizens to ensure that the Web will serve humanity.

The event marked the launch of his thirty-hour journey from Geneva to London and then to Lagos, to retell the history of the Web and discuss its impact and its future. Before leaving, Berners-Lee received his original Web proposal sonified and on a format familiar to 1989: a walkman. Each hour of his journey will represent a year in the Web's history and the World Wide Web Foundation invites each of the users to contribute to the crowdsourced Twitter timeline of the Web's milestone moments.

The second panel discussion "Towards the Future" looked at where the Web is today and what paths it could take. Chaired by Bruno Giussani, the panel welcomed Doreen Bogdan-Martin, Director of the Telecommunication Development Bureau of the International Telecommunication Union, Jovan Kurbalija, Executive Director of the UN Secretary General High-level Panel on Digital Cooperation, Monique Morrow, President and co-founder at the Humanized Internet and Zeynep Tufekci. Speakers explored how the evolution of technology influences our lives, ranging from users' control over their identities and personal data to the ongoing movement to defend and save the Web.

"Throughout the event, we learned about the challenges the Web faces today, and that arise from what makes the Web wonderful: its very openness," pointed out Charlotte Warakaulle, Director of International Relations at CERN. "We learned that these issues, such as the ease with which the Web can be used for surveillance, either for commercial or political ends, are collective. The different perceptions of the internet in different parts of the world also present a challenge. It was a worrying conversation, but one that had an optimistic thread: there is growing recognition of the problems the Web faces, and a growing movement to solve them."

The event also showcased the hackathon that took place at CERN, gathering developers and designers who recreated the first World Wide Web browser.

Find out more by following #web30 and by visiting the Web30 website.

More pictures of the event are available on CDS (*https://cds.cern.ch/record/2665683*).

The walkman that Tim Berners-Lee received for his 30-hour journey: his original Web proposal sonified and a compilation of music hits from 1989, listed on the right hand side of the image. (Image: CERN)

Cristina Agrigoroae

LS2 REPORT: REJUVENATION FOR THE ANTIPROTON DECELERATOR

The Antiproton Decelerator will see refurbishment work that will help its experiments to trap more antimatter than before

The AD target area during LS2 (Image: Maximilien Brice/CERN)

The Antiproton Decelerator (AD), sometimes known as the Antimatter Factory, is the world's largest source of antimatter and has been operational since 2000. Here, antiprotons are slowed down and sent into the experiments, where they are combined with antielectrons to produce the most basic antiatom: that of antihydrogen. Over the course of the second long shutdown of CERN's accelerator complex (LS2), the AD will receive several enhancements as well as repairs and refurbishments.

The recently installed ELENA ring, which was commissioned over 2017 and 2018, is designed to slow down even further the antiprotons decelerated by AD to ensure that the experiments can trap up to 100 times more antiprotons than they could without it. At the moment, ELENA is only connected to one of the experiments within the AD hall, the new GBAR experiment. The main work being done on the AD during the next two years is to extend the beam line from ELENA to all of the existing experiments and get ELENA fully operational. The lines

that took the particles from the AD to the experiments have now been fully dismantled to prepare for the new injection lines from ELENA.

Other planned and ongoing activities involve the AD's 84 magnets, which focus and steer the whizzing antiprotons along their racetrack. Most of these magnets were recycled from previous accelerator facilities and are much older than the AD itself. They are in need of repairs and refurbishment, which started during the previous long shutdown (LS1) and was pursued during subsequent year-end technical stops (YETS). So far, nine of the magnets have been treated, and 20 of them are scheduled for treatment during LS2. The remaining magnets will either be treated in situ or will undergo refurbishment during the next YETS and the third long shutdown (LS3).

Removing the magnets to take them to the treatment facility is no easy task. The AD ring is encased in a large shielding tunnel made of concrete blocks. Therefore, the blocks making up the ceiling near the magnet in question have to first be removed and stored, allowing a crane to descend though the opening and extract the magnet (which weighs up to 26 tonnes), sometimes with a margin of only 1 cm. Related work is being done to consolidate other elements of the AD, such as the kicker magnets, the septa magnets and the radiofrequency cavities.

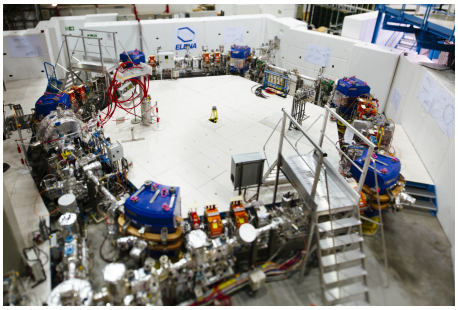
One of the main tasks of LS2 that has already been achieved was the installation of a new cooling pump for the AD. Previously, a single set of pumps were operated, connected to both the AD itself and to its experiments. This meant that the pumping system was operational year round next to the AD ring, producing a constant noise at over 100 decibels in some places. The new dedicated pump allows the main pumping group to be turned off without affecting the experiments' cooling systems, saving money and improving working conditions for those who need to be in close proximity to the AD over the shutdown period. It also provides much-needed redundancy to the cooling circuits.

By the end of LS2, the AD hall will look very different from what it does today, but the changes are not merely superficial. They will ensure that CERN's antimatter factory continues to operate with high efficiency and help explore the mysteries surrounding elusive antimatter.

Achintya Rao

EXCEPTIONALLY SLOW ANTIPROTONS

The commissioning of ELENA continued in 2018, culminating in the production of the first very-low-energy antiproton beams



The commissioning of ELENA continued in 2018, culminating in the production of the first very-low-energy antiproton beams (Image: CERN)

ELENA (Extra Low ENergy Antiproton), the new antimatter deceleration ring, will soon form the link between the Antiproton Decelerator (AD) and the antimatter experiments. At present, ELENA is able to supply only the GBAR experiment, which received its first beams of antiprotons last year, but during Long Shutdown 2 (LS2), extraction lines will be installed between ELENA and the other experiments (ALPHA, ASACUSA, ATRAP and BASE).

“During the 2017/2018 extended year-end technical stop (EYETS), we were able to install the electron cooling system,” explains Gérard Tranquille, who is responsible for this essential equipment. “Even though we had to resolve a vacuum leak problem, we were able to install the ELENA ring in its nominal configuration and continue with the commissioning.” The electron cooling system makes it possible to concentrate the particle beams by reducing the beam emittance, or in other words, the transverse dimensions of the beam and its energy spread. In this way, the experiments can be supplied with denser beams, increasing their chances of trapping antiprotons.

The members of the team had to deal with several technical problems during commissioning, but they are pleased with the machine's performance: “The last tests carried out in November were very encouraging,” explains Christian Carli, ELENA project leader. “We were able to produce antiproton beams with characteristics that were sufficiently close to the nominal values,” adds Tommy Eriksson, who is responsible for organising the machine's commissioning. “Thanks to ELENA, the antimatter experiments will see a notable improvement in their operating conditions, as they will have the opportunity to work with beams with an energy of 0.1 MeV.”

Following the tests with beam in November, the transport team and the people in charge of the equipment, with the support of the technical coordination team, started dismantling the magnetic lines connecting the AD to the experiments in the old experiment area. “These lines are gradually being replaced by the electrostatic lines that will connect ELENA to the experiments,” explains François Butin, the project's technical coordinator. “There's no turning back now... but we have every faith in ELENA; we're sure that the machine will be ready to supply very-low-energy antiproton beams after LS2,” concludes Wolfgang Bartmann, who is in charge of coordinating the design and construction of these lines.

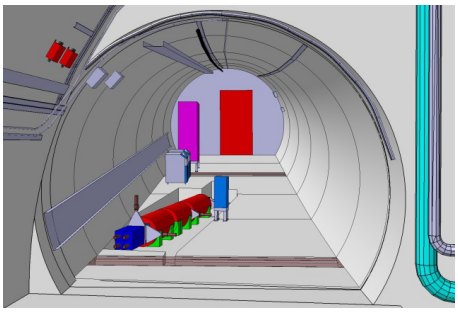
For more information on ELENA, see our previous articles:

- *A new ring to slow down antimatter*
- *First antiprotons in ELENA*

Anaïs Schaeffer

FASER: CERN APPROVES NEW EXPERIMENT TO LOOK FOR LONG-LIVED, EXOTIC PARTICLES

The experiment, which will complement existing searches for dark matter at the LHC, will be operational in 2021



A 3D picture of the planned FASER detector as seen in the TI12 tunnel. The detector is precisely aligned with the collision axis in ATLAS, 480 m away from the collision point. (Image: FASER/CERN)

Geneva. Today, the CERN Research Board approved a new experiment designed to look for light and weakly interacting particles at the LHC. FASER, or the Forward Search Experiment, will complement CERN's ongoing physics programme, extending its discovery potential to several new particles. Some of these sought-after particles are associated with dark matter, which is a hypothesised kind of matter that does not interact with the electromagnetic force and consequently cannot be directly detected using emitted light. Astrophysical evidence shows that dark matter makes up about 27% of the universe, but it has never been observed and studied in a laboratory.

With an expanding interest in undiscovered particles, particularly long-lived particles and dark matter, new experiments have been proposed to expand the scientific potential of CERN's accelerator complex and infrastructure as part of the Physics Beyond Collider (PBC) study, under whose aegis FASER operates. “This novel experiment helps diversify the physics programme of colliders such as the LHC, and allows us to address unanswered questions in particle physics from a different perspective,” explains Mike Lamont, co-coordinator of the PBC study group.

The four main LHC detectors are not suited for detecting the light and weakly interacting particles that might be produced parallel to the beam line. They may travel hundreds of metres without interacting with any material before transforming into known and detectable particles, such as electrons and positrons. The exotic particles would escape the existing detectors along the current beam lines and remain undetected. FASER will therefore be located along the beam trajectory 480 metres downstream from the interaction point within ATLAS. Although the protons in the particle beams will be bent by magnets around the LHC, the light, very weakly interacting particles will continue along a straight line and their “decay products” can be spotted by FASER. The potential new particles would be very collimated with the beam, spreading out very little, therefore allowing a relatively small and inexpensive detector to perform highly sensitive searches.

The detector's total length is under 5 metres and its core cylindrical structure has a radius of 10 centimetres. It will be installed in a side tunnel along an unused transfer line which links the LHC to its injector, the Super Proton Synchrotron. To allow FASER to be constructed in a quick and affordable way, it will use spare detector parts kindly donated from the ATLAS and LHCb experiments. The collaboration of 16 institutes that is building the detector and will carry out the experiments is supported by the Heising-Simons Foundation and the Simons Foundation.

FASER will search for a suite of hypothesised particles including so-called “dark photons”, particles which are associated with dark matter, neutralinos and others. The experiment will be installed during the ongoing Long Shutdown 2 and start taking data from LHC's Run 3 between 2021 and 2023.

“It is very exciting to have FASER approved for installation at CERN. It is amazing how the collaboration has come together so quickly and we are looking forward to recording our first data when the LHC starts up again in 2021,” says Jamie Boyd, co-spokesperson of the FASER experiment.

“FASER is a neat physics proposal that addresses a particular aspect in the search for physics beyond the Standard Model and I am pleased to see it being implemented so efficiently,” adds Eckhard Elsen, CERN's Director for Research and Computing.

Cristina Agrigoroae

LHC: PUSHING COMPUTING TO THE LIMITS

The LHC produced unprecedented volumes of data during its two multi-year runs, and, with its current upgrades, more computing challenges are in store

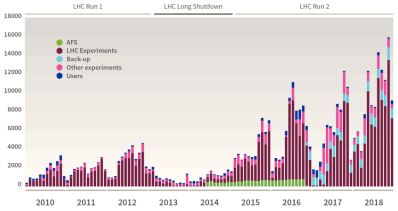
At the end of 2018, the Large Hadron Collider (LHC) completed its second multi-year run (“Run 2”) that saw the machine reach a proton–proton collision energy of 13 TeV, the highest ever reached by a particle accelerator. During this run, from 2015 to 2018, LHC experiments produced unprecedented volumes of data with the machine's performance exceeding all expectations. This meant exceptional use of computing, with many records broken in terms of data acquisition, data rates and data volumes. The CERN Advanced Storage system (CASTOR), which relies on a tape-based backend for permanent data archiv-

ing, reached 330 PB of data (equivalent to 330 million gigabytes) stored on tape, an equivalent of over 2000 years of 24/7 HD video recording. In November 2018 alone, a record-breaking 15.8 PB of data were recorded on tape, a remarkable achievement given that it corresponds to more than what was recorded during the first year of the LHC's Run 1.

The distributed storage system for the LHC experiments exceeded 200 PB of raw storage with about 600 million files. This system (EOS) is disk-based and open-source, and was developed at CERN for the extreme LHC computing requirements. As well as this, 830 PB of data and 1.1 billion files were transferred all over the world by File Transfer Service. To face these computing challenges and to better support the CERN experiments during Run 2, the entire computing infrastructure, and notably the storage systems, went through major upgrades and consolidation over the past few years.

New IT research-and-development activities have already begun in preparation for the LHC's Run 3 (foreseen for 2021 to 2023). "Our new software, named CERN Tape Archive (CTA), is the new tape storage system for the custodial copy of the physics data and a replacement for its predecessor, CASTOR. The main goal of CTA is to make more efficient use of the tape drives, to handle the higher data rate anticipated during Run 3 and Run 4 of the LHC," explains German Cancio, who leads the Tape, Archive & Backups storage section in CERN's IT department. CTA will be deployed during the ongoing second long shutdown of the LHC (LS2), replacing CASTOR. Compared to the last year of Run 2, data archival is expected to be two-times higher during Run 3 and five-times higher or more during Run 4 (foreseen for 2026 to 2029).

The LHC's computing will continue to evolve. Most of the data collected in CERN's data centre is highly valuable and needs to be preserved and stored for future generations of physicists. CERN's IT department will therefore be taking advantage of LS2, the current maintenance and upgrade of the accelerator complex, to perform the required consolidation of the computing infrastructure. They will be upgrading the storage infrastructure and software to face the likely scalability and performance challenges when the LHC restarts in 2021 for Run 3.



Data (in terabytes) recorded on tape at CERN month-by-month. This plot shows the amount of data recorded on tape generated by the LHC experiments, other experiments, various back-ups and users. In 2018, over 115 PB of data in total (including about 88 PB of LHC data) were recorded on tape, with a record peak of 15.8 PB in November (Image: Esma Mobs/CERN)

Esra Ozcesmeci

X-RAY IMAGING IN PROGRESS: KEEP CLEAR!

Zones where industrial radiography is in progress are clearly marked and must be avoided, since high levels of radiation may be present within the marked area

Industrial radiography under way at CERN. The safety cordon is there for your safety – never cross it except under the supervision of a qualified radiation worker! (Image: CERN)

Industrial radiography is a non-destructive testing technique used widely at CERN to examine the internal structure of samples ranging from welds to structural elements of buildings. It uses high-energy radioactive sources or an X-ray generator to examine the structure and integrity of samples in a non-destructive way. It is widely deployed at CERN by the Engineering department's Mechanical and Materials Engineering (EN-MME) group to examine structures as diverse as the piping that feeds fuel to the new diesel groups close to Entrance B and welds in the fire extinction network of the new Building 311. The work may be outsourced to one or more companies, depending on the workload at any given time.

Radiography can be carried out anywhere on the CERN sites, indoors or outdoors, including in areas where you would not normally expect to encounter radiological hazards. Where radiography is planned, it is clearly announced through the IMPACT procedure and the relevant TSO, building occupants and others who may be immediately concerned are informed. If you are not informed in this way, you will still be able to identify the area where the radiography is taking place. It will be clearly cordoned off and there will be clearly visible information panels displaying telephone numbers that you can call for further information. Radiographical examinations normally take place outside working hours, between 7 p.m. and 6 a.m.

All radiographical procedures at CERN are carried out according to the internationally-accepted ALARA (As Low As Reasonably Achievable) principle, which ensures that every intervention is necessary, with radiation doses limited and optimised. Each campaign is painstakingly prepared. Nevertheless, within the marked-off area, there is a risk of exposure to very high levels of radiation, and it is therefore important to respect the safety cordon.

Remember, at CERN, we are each responsible for our own safety. If you see a cordon indicating that radiography is in progress, do not cross it. Only qualified radiation workers carrying out the inspection are authorised to do so.

If you have to cross the area for work or personal reasons – if you have parked your car on the other side, for example – call

one of the phone numbers on the information panels. A qualified radiation worker will help you cross the zone safely.

Last but not least, if you have not done so already, follow the e-learning course "Radiation Protection – Awareness", which is now obligatory for everyone working on the CERN sites.

FIRIA PROJECT: ADDRESSING FIRE SAFETY AT CERN

This project will develop a general integrated risk assessment methodology and use it for a number of CERN's facilities

CERN's research infrastructure requires a whole set of safety and environmental protection rules, in order to fulfil the safety policy of the Organization. With many facilities containing potentially combustible materials, one of the main safety concerns is fire.

To assess the risks relating to fire and, in particular, to the release of radioactive substances as a consequence of fire, the CERN HSE unit has introduced the FIRIA (Fire-Induced Radiological Integrated Assessment) project, managed by the HSE Fire Safety Engineering team. FIRIA's objective is to develop a general integrated risk assessment methodology and to use it for a number of CERN's facilities.

Moreover, a workshop titled "An engineering perspective on risk assessment: from theory to practice" was held at CERN in November 2018. The aim of the workshop was to share knowledge among risk assessment researchers and practitioners on different types of hazards and to raise awareness on this topic. The workshop included talks on quantitative risk analysis, risk acceptance criteria and uncertainty in risk assessment, as well as optimisation and cost-effectiveness of risk mitigation.

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Learn more about the risk assessment workshop here (https://indico.cern.ch/e/RiskAssessmentWorkshop).
Learn more about the FIRIA project here (https://hse.web.cern.ch/content/firia).

COMPUTER SECURITY: A "FILE DROP" FOR CONFIDENTIAL DATA

Why not try CERN IT's CERNbox service? It encrypts the transmission of documents during the sharing process, avoids the proliferation of copies by offering a single place to deposit a file, and allows revocation of access

Do you often find yourself in situations where you would like to share documents with your colleagues, or need to ask people to provide you with documents? Given that many encryption solutions (in particular e-mail encryption) require a certain level of IT skills, such documents invariably end up being requested and sent via e-mail and are therefore unencrypted and hence visible to anyone, as the standard e-mail protocol does not come with any protection. Confidentiality rating: zero. This means only one thing: alternative communication channels are needed...

Rather than using e-mail, why not try CERN IT's CERNbox service? It encrypts the transmission of documents during the sharing process, avoids the proliferation of copies by offering a single place to deposit a file, and allows revocation of access (useful for example in the case of erroneous attachments or recipients). Even better, for receiving documents it allows you to create a unique web address where anyone can deposit a file for you.

This means that it represents the perfect method to allow anyone to upload files intended to be shared with you in a secure and confidential manner. It is a "file drop" functionality where anyone can "drop" any kind of file into a dedicated folder, which is only accessible to you and to those whom you expressly grant access. Using a web browser, and a secured HTTPS connection, the communication is well encrypted using an established web standard. Via this method, files can easily be dropped from any Internet-connected device. All you need to do is to provide your external clients a unique web address (like https://cernbox.cern.ch/index.php/s/LnBpPZvmsoFEEWi) where they can upload any file required. Once this is done, no one but you will be able to see it. Overwriting or deleting the information is also impossible.

So if you are working for a service which regularly requests documents from third parties or external collaborators, CERNBox is particularly useful as you can set up a unique web address which can be given to anyone. So, give it a go! Here is the recipe:

1.) Go to https://cernbox.cern.ch and log in;
2.) Create a new folder by left-clicking on the "+" symbol on the middle-top, select "Folder" and give it a name;
3.) Once created, Left-click the "<" (share icon) on the right-hand side of your folder: a menu will open up;
4.) Under "Sharing", select "Public Links" and click on "Create public link";
5.) Select "Upload only (File Drop)" and click on "Share" (you can also define

a password and an expiration date, but please note that this is not recommended here);
6.) In the right-hand menu, you will then see an entry “File Drop” and below it a unique link/URL. This is the drop box folder you can now securely share with your peers for upload;
7.) Check the folder regularly to see newly uploaded files.

A detailed step-by-step guide can also be found here: https://cernbox-manual.web.cern.ch/cernbox-manual/en/sharing/share_a_folder.html#link-share-upload-only.

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Do you want to learn more about computer security incidents and issues at CERN? Follow our Monthly Report. For further information, questions or help, check our website or contact us at Computer.Security@cern.ch.

The Computer Security Team

Announcements

JOIN US FOR A VOXXED DAY

A new Voxxed Days event is coming to CERN on 01 May 2019, and everyone is invited

Photo from the 2017 edition (Image: CERN)

Voxxed Days are a series of tech events organised by local community groups and supported by the Voxxed team. Sharing the Devoxx philosophy that content comes first, these events see both internationally renowned and local speakers converge at a wide range of locations around the world. Content on Voxxed is generated by the developer community, “from developers, for developers”. Supported by local user groups, Voxxed Days CERN will offer the chance to hear from experts across a range of important topics.

If you're a developer whose curiosity is piqued by technological developments around Java, JVM, performance, productivity, web technologies or developer practices, then this is the event for you. We promise an outstanding day filled with amazing content, all at an iconic location, at the home of the LHC.

Speakers include:

- Dr Venkat Subramaniam
- Robert C. Martin (“Uncle Bob”)
- Mark Reinhold
- Holly Cummins
- Kevlin Henney
- Blazej Kubiak & Krzysztof Kudrynski
- Hubert Sablonnière
- Martin Thompson
- Sebastian Daschner
- Cagatay Civici
- Monica Dinculescu
- David Gageot
- Anjana Vakil

Tickets for the Voxxed Day CERN are on sale now, and you can register here (*https://indico.cern.ch/event/750582/registrations/44386/*).

There are also a limited number of free places available for CERN personnel, which can be obtained through Indico (*https://indico.cern.ch/event/795721/*).

You can also follow the event on Twitter for further information, @VoxxedCERN.

12 MARCH: PRESENTATION OF WÜRTH ELEKTRONIK (SCHWEIZ) AG

Tuesday 12 March 9h – 16h
CERN Building 61-1-009

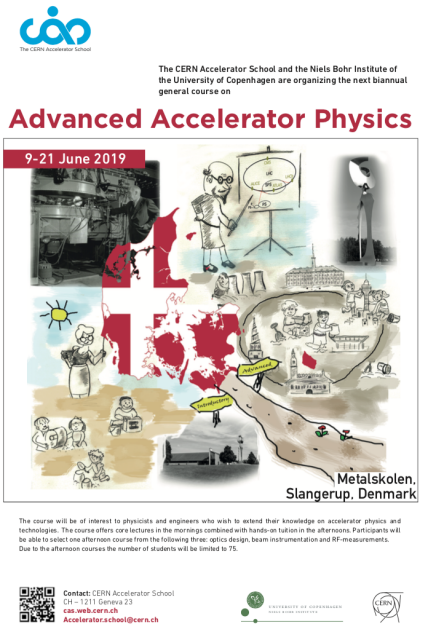
Main topics:

- Presentation of our products and services in the Passive Electronics, Connectivity and Custom Products section.
- Many Design kits will be presented.We remind you that our design kits are being filled for free.
- Possibility of small catering on site

For any questions, please contact Sebastien Wiederkehr: Sebastien.Wiederkehr@we-online.com; +41 795 798 299.

CERN ACCELERATOR SCHOOL: ADVANCED ACCELERATOR PHYSICS 9 – 21 JUNE 2019

Registration is now open for the CERN Accelerator School's course on Advanced Accelerator Physics, to be held in Slangerup, Denmark, from 9 to 21 June 2019



(Image: CERN)

Registration is now open for the CERN Accelerator School's course on Advanced Accelerator Physics, to be held in Slangerup, Denmark, from 9 to 21 June 2019.

The course will be of interest to physicists and engineers who wish to extend their knowledge on accelerator physics and technologies. The course offers core lectures in the mornings combined with hands-on tuition in the afternoons. Participants will be able to select one afternoon course from the following three: optics design, beam instrumentation and RF-measurements.

For more information and application, please visit the school website.

14 MARCH: CLOSURE OF ROADS FOR AN EXCEPTIONAL CONVOY ON THE MEYRIN SITE

Due to an exceptional convoy, Route Einstein, Route Balmer and Route de Meyrin will be closed on Thursday 14 March from 9.00 am to 12.00 pm

Due to an exceptional convoy, Route Einstein, Route Balmer and Route de Meyrin will be closed on Thursday 14 March from 9.00 am to 12.00 pm. The Route de Meyrin will also be closed from the Route de l'Europe roundabout to Entrance B. A diversion will be put in place by the Swiss and French traffic services (see map).

Entrance E will stay open exceptionally on Thursday morning until 1:00 pm (to enter CERN only, not to exit).

Thank you for your understanding.

EN-HE Transport Group

19-20 MARCH: BELGIUM AT CERN

On 19 and 20 March, 36 Belgian firms will be present at CERN. The goal of these two days it to create new procurement opportunities with Belgian industry

On Tuesday 19 March and Wednesday 20 March, 36 Belgian firms will be present at CERN. The goal of these two days it to create new procurement opportunities with Belgian industry. CERN personnel are encouraged to participate in B2B meetings directly with the companies, these will be held at Ideasquare (Building 3179, near the Globe) on 19-20 March 2019.

The list of firms and the form for CERN personnel to sign up for the meeting is here: https://indico.cern.ch/event/802580

This two-day event is part of CERN's broader goal to aim for balanced industrial return, i.e. a fair distribution of CERN's procurement budget to our Member States.

Ombud's corner

INFORMAL CONFLICT RESOLUTION WITH THE HELP OF THE OMBUD: HOW DOES IT WORK?

At CERN, every member of the personnel has the right to formally contest an administrative decision by requesting a review or by making an internal appeal. Anyone who feels that they're a victim of harassment can initiate proceedings with the Harassment Investigation Panel.

Instead of resorting to formal proceedings, however, members of the personnel can seek the Ombud's assistance to resolve a conflict informally.

How do you choose between the formal and informal approaches?

In the case of formal proceedings, the plaintiff leaves it to the Organization to resolve the dispute and subsequently impose its decision. If this decision favours one of the two parties, this can give the impression that there's a "winner" and a "loser". The relationship between the two parties is at great risk of being seriously and permanently affected. Moreover, formal proceedings can prove long and arduous, and demand considerable resources, from the Organization as well as from both parties. Formal proceedings are governed by strict rules that must be scrupulously observed. Notes are taken throughout the various stages, culminating in a written recommendation.

Every year, the Human Resources department publishes a report on the appeals that have been lodged and handled and the decisions that have been taken. Of course, the individuals involved remain anonymous.

When they use the Ombud's services, members of the personnel try to resolve the conflict "**amicably**" themselves. The aim is to reach an **agreement** that benefits both parties. The **parties themselves establish the rules of the game**, provided that the basic principles of respect, listening and goodwill are observed. This process enables them to **quickly** find a solution that works for them, using **as few resources as possible**. Thanks to this joint approach, the colleagues can rebuild, **preserve and sometimes even improve their relationship**.

The Ombud keeps **no written record** of the cases handled. Any handwritten notes are destroyed once the conflict is resolved. The Ombud does write an annual report, but this gives only statistics and trends and never mentions specific cases.

Access to formal conflict resolution proceedings plays a key role in protecting members of the personnel from arbitrary and unfair situations and inappropriate behaviour. However, the informal approach has many advantages, because it's effective while also improving relationships in the long term.

I therefore encourage you to first try to resolve your dispute informally. If this turns out to be impossible, or if your problem is particularly serious, remember that formal means of protecting yourself are always available to you.

Pierre Gildemyn

If you'd like to comment on any of my articles or suggest a topic that I could write about, please don't hesitate to e-mail me at Ombuds@cern.ch .