CERN Bulletin

Issue No. 49-50/2014 - Monday 1 December 2014
More articles at: **http://bulletin.cern.ch**

IDEAS WORTH NURTURING

Originally created in response to requests from experimentalists working in the collaborations, IdeaSquare has evolved into a place where innovative ideas meet established expertise. Although the project is still in its pilot phase, two EU-funded projects have found their home in the IdeaSquare building and 46 students have already participated in the Challenge-Based Innovation courses based there. More to come…

IdeaSquare, which will be inaugurated on 9 December, is the name given to the B3179 refurbished building at LHC Point 1. More importantly, IdeaSquare is the name of a project designed to nurture innovation at CERN. "The scope of the project is to bring together researchers, engineers, people from industry and young students and encourage them to come up with new ideas that are useful for society, inspired by CERN's ongoing detector R&D and upgrade projects," explains Markus Nordberg who, together with Marzio Nessi, set up IdeaSquare within the Development and Innovation Unit (see box).

In addition to pursuing its core mission, IdeaSquare has already attracted two EU-funded projects – EDUSAFE and TALENT – and has hosted two Challenge Based Innovation (CBI) courses and one hackathon, among other events. "IdeaSquare is a modular building built out of containers," says Nordberg. "Projects can find office space and a ready-to-use technical infrastructure here. They can also take advantage of the great networking and idea-sharing opportunities."

The only requirement to be part of the IdeaSquare programme is simple but very challenging: you must have an idea worth nurturing – that is, an idea that combines innovation with usefulness in particle physics and for society. "At IdeaSquare, we agree to support projects only after consulting with all the parties involved, including, of course, the CERN Management and experiments," explains Nordberg.

One of the new ideas currently being considered as a potential future project to be developed at IdeaSquare is the possible use of technologies related to the Gas Electron Multiplier (GEM) detectors found in the CMS experiment. "In the current detectors, charged particles are multiplied and accelerated to "impact" on the read-out

(Continued on page 2)

A CLEAN BILL OF HEALTH FOR CERN'S MEDICAL APPLICATIONS OFFICE

Many of you will have had the opportunity to follow the seminar on medical applications given by two members of our new International Strategy Committee for medical applications on 20 November. This occasion gives me a good opportunity to take stock of what's been achieved since we set up our office for medical applications under Steve Myers almost a year ago.

(Continued on page 2)

In this issue

News

Published by:
CERN-1211 Geneva 23, Switzerland
Tel. + 41 22 767 35 86 **Printed by:** *CERN Printshop*

- ISSN: **Printed version:** *2077-950X*
Electronic version: *2077-9518*

A word from the DG

(Continued on page 1)

A CLEAN BILL OF HEALTH FOR CERN'S MEDICAL APPLICATIONS OFFICE

It's already an impressive list of achievements, and one that's poised to grow. The International Strategy Committee is perhaps the most visible part of it. Meeting for the first time last week, the Committee will help us focus and prioritise our efforts so we can extract the maximum benefit. The existence of the office itself is already a major step in this direction: today, instead of having seven separate medical initiatives at CERN, we have a single coordinated approach and each component benefits.

Let's take a look at the current state of progress. The study to develop LEIR into the OPENMED biomedical research facility is complete, and fundraising has begun. The MEDICIS medical isotope facility is on track to begin operation in 2016. A study for a compact hadron therapy accelerator is under way, and we have taken out a patent on a high-frequency radio-frequency quadrupole, RFQ, that could be the front end for such a machine as well as having many other potential medical applications. Another exciting development is the establishment of a team to look at the potential for hadron therapy in areas other than cancer treatment: certain neurological and cardiac disorders appear to be worth further study.

The medical applications office has also been busy establishing collaborations, both within CERN and further afield. Discussions are ongoing within our IT Department to look at the issue of medical data storage, transfer and analysis using CERN expertise in the field, while our OPENLAB partners are looking at the question of large-scale computing for health applications. Beyond CERN, we are talking to teams at hospitals and universities in the local region, several CERN Member States, the USA, Japan, China, Australia, South America, South Africa and South Korea.

The talks on 20 November are a facet of a much more profound shift in CERN's approach to medical applications. And it's an important shift. Basic research in physics is and always will be our core mission; yet we owe it to society to ensure that our technology and expertise deliver immediate and tangible benefits wherever possible. One year on, we can give our new office for medical applications a very clean bill of health.

Rolf Heuer

IDEAS WORTH NURTURING

(Continued on page 1)

electronics," explains Stefano Colafranceschi, an aeronautical engineer working in the CMS collaboration. "With SpaceGEM, we are thinking of building a novel engine for spaceships using GEM's very efficient capability to accelerate charged particles. The idea consists of accelerating a plasma of charged particles and eventually expelling it to propel the spaceship."

Besides SpaceGEM, and thanks to the CBI courses and other initiatives, IdeaSquare has already gathered over a hundred new ideas, just a few of which will end up being prototyped at CERN. "IdeaSquare is an example of the many connections existing between "Open Science" and "Open Innovation". It is the common ground where creativity coming from research infrastructure meets society at large," concludes Sergio Bertolucci, CERN's Director for Research and Computing.

Antonella Del Rosso

The Development and Innovation Unit

Established in 2013, the Development and Innovation Unit (DG-DI-DI) contributes to the longer-term development work on detector and imaging technology carried out at CERN and elsewhere, with the parallel aim of generating benefits to society. The Unit works with and engages external partners to foster the development and innovation potential of detector technology outside the domain of particle physics. The Unit works closely with related departments and groups, including for example FP-KT, PH, IT and DG-EU. It actively seeks external funding for the above activities from sources such as the European Union.

Besides IdeaSquare, the Development and Innovation Unit also coordinates the following activities:

- Neutrino programme - Launching an R&D programme for the development of technologies required for the creation of a modern neutrino beam line and to host related installations and projects;
- ATTRACT - Initiative presented to the European Commission for a dedicated detector and imaging R&D programme, engaging small and medium-sized enterprises and students.

LS1 REPORT: HANDING IN THE ATLAS KEYS

After completing more than 250 work packages concerning the whole detector and experimental site, the ATLAS and CERN teams involved with LS1 operations are now wrapping things up before starting the commissioning phase in preparation for the LHC restart. The giant detector is now more efficient, safer and even greener than ever thanks to the huge amount of work carried out over the past two years.

Hundreds of people, more than 3000 certified interventions, huge and delicate parts of the detector completely refurbished: the ATLAS detector that will take data during Run 2 is a brand new machine, which will soon be back in the hands of the thousands of scientists who are preparing for the high-energy run of the LHC accelerator.

"During LS1, we have upgraded the detector's basic infrastructure and a few of its sub-detectors," explains Beniamino Di Girolamo, ATLAS Technical Coordinator. "The detector can now safely use more electrical power; it is better protected from unexpected power glitches, which used to cause downtime in our data-taking; it has more powerful refurbished cooling and ventilation systems as well as brand new aluminium beam pipes, replacing the old stainless steel pipes; and last but not least, we have improved our pixel detector with the insertion of a new innermost layer (IBL) and fixed some electrical and optoelectronic issues that were causing the other three pixel layers and disks – vital components of the tracking system – to degrade quickly."

Some upgrades have also been carried out to reduce the impact that ATLAS has on the environment. "The original inner detector cooling systems use fluorocarbons," says Di Girolamo. "We are now using CO_2 for the IBL, which has a much lower greenhouse effect and allows us to significantly reduce the detector's ecological footprint in the event of leaks, and we have repaired existing leaks in the Muon Spectrometer chambers. Various sections of the beam pipes have also been replaced to reduce the use of materials that are easily activated in the experimental environment. This will simplify the decommissioning phases after the end of run."

After two years of hard work, the ATLAS teams are now completing their operations in the cavern before starting the commissioning of the whole detector. "We have just completed the very delicate phase of cleaning, which has to be done before turning the toroid on," says Di Girolamo. "The whole detector and the experimental cavern have been inspected over five days by dozens of ATLAS people, who searched for any minuscule metallic object left around the experiment during the work. We are now ready to enter the final commissioning phase."

The whole collaboration has started the countdown and looks forward to closing the detector in preparation for the start of the new run. But, yes, there is one drawback: the very popular experimental site, which has welcomed over 37,000 visitors in two years, will no longer be open to visits until the next long shutdown. That's the price to pay for doing physics!

Antonella Del Rosso

Meanwhile, elsewhere…

Starting Friday 28 November, further training quenches will be carried out in Sector 6-7 (see LS1 Report in the last Bulletin for more about Sector 6-7's milestone quench). Meanwhile, at Point 8, teams are currently resolving an issue with a cryogenic installation and carrying out maintenance of the cooling and ventilation systems (see Bulletin 21-22/2013).

CSCM tests have been completed in Sector 4-5 and are now starting in Sector 3-4. In Sector 4-5, the cool-down from 20 K to 1.9K is progressing smoothly and has recently been completed in Sector 2-3. ELQA tests are in progress in Sectors 2-3 and 7-8, and powering tests are in progress in Sectors 1-2, 5-6 and 6-7 (see Bulletin 17-18/2013).

Cleaning up the ATLAS cavern and detector in preparation for Run 2.

CERN'S ROLE IN MEDICAL APPLICATIONS

Last week, CERN hosted the first meeting of the International Strategy Committee for medical applications. This Committee will help CERN establish its roadmap in the field of research and development activities for medical applications. Here the CERN Bulletin speaks with the Chair of the Committee as he shares his expectations and his vision.

Dr Michael Baumann is the Director of the Radiation Oncology department at the Carl Gustav Carus University Hospital in Dresden and of the Institute for Radiooncology of the Helmholtz-Zentrum Dresden-Rossendorf (Germany). He has recently been appointed Chair of CERN's International Strategy Committee for medical applications – the team of experts who will advise the CERN Medical Applications Study Group led by Steve Myers. "CERN has a tremendous record in physics and basic research," says Baumann. "I think that it has a very important role in steering some of the R&D that cannot be done at universities or medical centres."

CERN's flagship project in the biomedical field is OPENMED, a new facility that could use beams produced by LEIR (see Bulletin 30-31/2012). The feasibility study, which includes looking at the possible use of the facility to test detectors, is well under way but the project needs to fundraise to ensure its implementation. "Today, about 50% of cancer patients are treated with radiotherapy," says Baumann. "However, we still need to do a lot of research to develop future improvements

and, in this respect, it is vital to have a central laboratory that provides different beam qualities with the required specifications and for the appropriate duration needed. That can be done at CERN, thanks to its existing facilities and well-established expertise."

Over the years, many universities, research institutes and hospitals have developed their own specific strategies, leading to the varied situation we observe today where not all facilities are state-of-the-art. "We need to create an international network to bring together all the teams involved, but, in parallel, we should also focus on developing cheaper and more compact technical solutions for particle therapy. These could then be used to treat a wider community in a better way," comments Baumann.

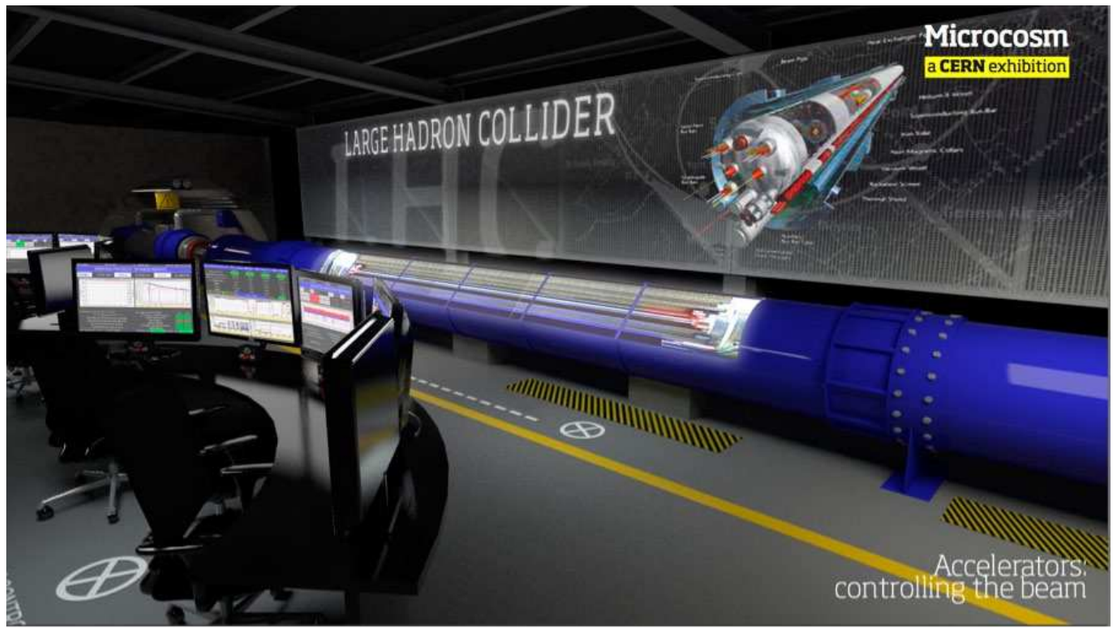
At its first meeting, the newly established committee also discussed some of the concrete issues affecting particle therapy, including advanced image-guided particle therapy. "We do not yet have this possibility, although it is otherwise used in conventional photon therapy," explains Baumann. "Basic science, engineering and, of course, medicine are deeply involved in developing this possibility. This is where we also need the precious expertise from laboratories like CERN."

The committee is planning to set up working groups to tackle some of the issues discussed at the meeting. A very concrete follow-up is the decision to organise a meeting in Brussels in spring 2015 to bring together ESTRO, ENLIGHT, particle therapy centres in Europe, various institutes and networks involved with radiotherapy and CERN to discuss how to ensure that all parties are working in harmony. This is a much-needed step before undertaking specific fundraising activities for common projects that will help the wider community fight cancer with an improved strategy.

Antonella Del Rosso

MICROCOSM 2015: SHOWCASING REAL OBJECTS, REAL PEOPLE AND REAL DISCOVERIES

Every year since its inauguration in 1994, the well-loved Microcosm exhibition has played host to tens of thousands of students, tourists and VIPs alike. But the ever-changing CERN landscape warranted a new look for the exhibition, which was last updated in 2003. On 8 December, Microcosm will close for refurbishment, making way for a new, interactive exhibition space to be opened summer 2015.



In the Accelerator zone, Microcosm visitors will don the helmet of an LHC operator. Social media tools will be integrated into the exhibit, allowing visitors to share their "beam" with friends at home. (Conceptual art for the new Microcosm exhibition.)

While the Globe of Science and Innovation provides a spectacular introduction to CERN's key messages, Microcosm has always employed a more didactic approach. The new Microcosm will continue this complementary approach, whilst also immersing visitors into the day-to-day life of CERN people. "We want to highlight the amazing diversity of CERN, from the wide array of jobs being carried out here to the spectrum of nationalities, ages and backgrounds you see on site," says Emma Sanders, project leader in the EDU group, working with Spanish design team, Indissoluble.

The new Microcosm will include 1:1 scale audio-visual recordings that will allow visitors to "meet" CERNois. "This type of 'interaction' with CERN people will give visitors a sense of the physics and engineering challenges tackled at CERN, but also the Laboratory's open and creative environment of collaboration, the large number of students, the huge array of clubs and activities… everything that goes to make CERN such a special place," says Sanders.

The exhibit will also strive to include real data - live information about what is happening at CERN - and to give an idea of the scientific challenges explored by LHC experiments. Whilst the new Microcosm will target most of its content at a non-specialist public, the exhibition should also be attractive to those with some prior knowledge who want to know what the challenges are at CERN today, as a recent survey highlighted the need for this.

The new Microcosm exhibition will use up-to-date technologies and content, spread across three main zones: "Exploring the Universe", "Accelerators" and "Making Discoveries". While the exhibit is set to be a high-tech experience - incorporating the excellent work carried out by CERN's Medialab, the team behind the interactive LHC tunnel experience - Microcosm will retain many of the popular historical pieces currently in place. Stay tuned to follow the exhibit's progress!

CERN Bulletin

TRANSFER LINE TESTS TAKE CENTRE STAGE

On 21-23 November, proton beams came knocking on the LHC's door. Shooting from the SPS and into the two LHC transfer lines, the proton beams were dumped just short of entering the accelerator.

For the first time since Run 1, the SPS to LHC transfer lines (TI8 and TI2) transported proton beams just short of the LHC. "We tested the beam instrumentation, the devices that measure the beam intensity, transverse beam profile, position and losses, as well as the beam collimators along the transfer lines," says Reyes Alemany Fernandez, the engineer in charge of the LHC. "We were also able to spot possible bottle necks in the beam trajectory and to perform the first optics measurements."

Once the beams arrived at the transfer line beam dumps, they generated offshoot particles - primarily muons - that are usually considered background events for the ALICE and LHCb detectors. During the weekend's tests, however, these muons were used to calibrate the ALICE and LHCb detectors. "The experiments were given the precise timing of each beam dump, which allowed them to tune their detectors and trigger to the LHC clock," says Verena Kain, SPS supervisor.

The weekend also saw action in the LHC itself, with the first direct tests of the LHC equipment. The Operations team looked at the timing synchronisation between the beam and the LHC injection and extraction systems: "We were able pulse the LHC injection kicker magnets and trigger the LHC Beam Dump System in Point 6, even though neither saw beam," explains Reyes. "These are key systems for the machine, so being able to successfully commission them prior to beam tests in February was invaluable." The injection lines were also primarily driven by the LHC control system. Although this could have been done using the SPS, it was a great opportunity for the Operations team to test the LHC timing system as well as the complex protocol that allows the LHC to request a beam from the injector chain.

The upper plot shows the trajectory of the first TI2 beam, which reached the end of the transfer line in a single attempt after 18 months of technical stop. Below, a smoother beam trajectory in TI2 after some corrections.

The transfer line tests were very successful thanks, in part, to careful preparation carried out since the beginning of the year. Regular "dry runs" were organised during the year by the LHC Operations team, together with the different equipment experts, to test and debug the accelerator sub-systems from the CCC control applications.

Katarina Anthony

Video available at **http://bulletin.cern.ch**

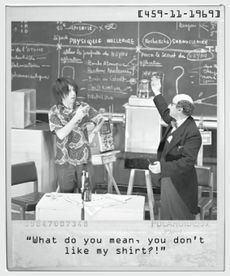
MYSTERY PHOTOS: CHALLENGE NO. 4!

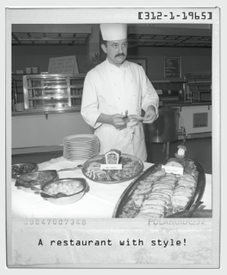
It has been said that the Higgs boson was the last piece of an incomplete puzzle. The Standard Model looks pretty good, but doesn't tell the whole story. Similarly, the tens of thousands of pieces in the CERN Photo Archive puzzle are gradually falling into place.

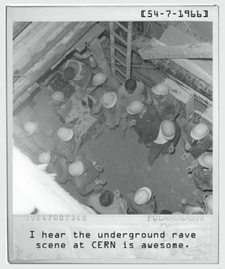
As we inspect album matches and gather caption information from people at CERN and around the world, the corners and edges are becoming clear. But we've got a big chunk of non-descript sky to plough through now.

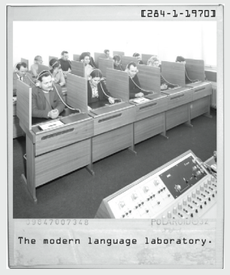
Sometimes, we can fit some pieces together without knowing what they show. We have grouped certain images into albums based on similarity. These are now in need of titles and descriptions. You can find them at: **cern.ch/go/K6HK.**

Meanwhile, here are some of our favourite pictures recently identified and matched to their corresponding albums:

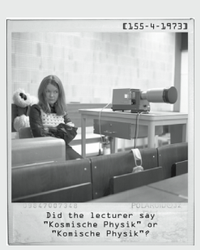


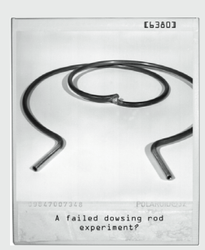






But what about the others? Can you help us identify any of the following pictures? Each picture's CERN Document Server (CDS) page has its own "suggest a caption" link where logged-in users can contribute directly.





For any other comments about the project, please get in touch by email on **photo.archive@cern.ch.**

This digitisation project is a collaboration between the Collaboration and Information Services Group (IT-CIS) and the Scientific Information Service (GS-SIS).

Alex Brown, Jens Vigen

BRAND NEW HALL IN THE MAIN BUILDING

The renovation of the UNIQA and post office premises is getting under way, with their reopening scheduled for the spring.

The renovation of the large hall in the main building (Building 500) has finally reached the home straight. As of this week, building contractors will get to work on the last part – the offices of UNIQA and *La Poste*. In the last week of November, the two concessions moved their offices across Route Scherrer to the same part of Building 510 where UBS was temporarily housed during the bank's refurbishment. Their services were therefore unavailable for one day.

The renovation work will last until the spring, with the new offices expected to open in May 2015. Between now and then, the windows and insulation will be completely refitted, with a view to reducing heat loss considerably, and, above all, the premises will be modernised to improve customer reception and service.

For example, UNIQA's new premises will feature a confidential area, guaranteeing that discussions between staff and clients remain private. The post office is also going to be modernised.

These renovations bring to an end the refurbishment of the main building's large entrance hall. Numerous services have seen their premises modernised for the benefit of their users as part of this large-scale project, including the Users Office, the Staff Association, UBS and part of Restaurant 1, not forgetting the central courtyard and the exhibition spaces.

Corinne Pralavorio

OMBUD'S CORNER

WHEN "STOP" DOESN'T WORK

In a previous Bulletin article we discussed the issue of how to deal with unwanted declarations of love. The focus there was on the importance of saying "stop" in a clear and unambiguous manner when faced with actions of this kind. But what do you do when this behaviour persists?

When there is a serious risk of the situation deteriorating into sexual harassment, stronger action needs to be taken. What you need to know is that CERN does not tolerate any form of harassment, which it has defined as "unwelcome behaviour that has the effect of violating a person's dignity and/or creating a hostile work environment…", and has clearly established procedures for dealing with such situations, which are laid out in Operational Circular no. 9 on the 'Principles and Procedures Governing Complaints of Harassment'.

> *"What is harassment? When does a compliment or the occasional conversational banter turn into harassment?"*
>
> *"Is it no longer acceptable to show or express one's liking for a colleague?"*
>
> *"Are we not going too far towards political correctness and imposing the norms of a few people or groups on the wider community by insisting on certain behaviours and drawing a line through others?"*

These are some of the questions that are often heard around the Laboratory when talking about respectful behaviour in the workplace, particularly in a multi-cultural environment like our own.

There is no simple answer to these questions as each and every one of us has our own sense of what is acceptable behaviour and, on the other hand, what makes us feel uncomfortable or even threatened. It is all about understanding the difference between the 'intention' and the 'impact' of our behaviour, and the key lies in learning to alert ourselves to the signals that tell us we may be at risk of crossing that dividing line and of not being sensitive to the other person's reaction.

To understand the impact of our actions, we need to focus on whether or not, within the other person's frame of reference, their sense of dignity was negatively impacted or whether they were in any way humiliated or insulted by what was said or done. In such a situation, to persist with this behaviour in the face of apparent discomfort or even an explicit request to "stop" would be to go against the CERN Code of Conduct and could eventually lead to a formal complaint of harassment.

> *"But this sort of thing does not happen at CERN."*

Unfortunately, but not surprisingly, our work environment is no less prone to the risk of such problems arising than any other workplace. Whether on the CERN site or while we are away on conferences or other work-related activities, it is up to us to break the prevailing silence and speak up against jokes, remarks or other actions if we perceive them to be contrary to the principles of mutual respect.

As colleagues and bystanders, we all have the responsibility to promote a peer culture that takes a stand against any behaviour that could deteriorate into harassment. At the same time, we need to respect the dignity of all parties concerned by not participating in rumours and gossip and trusting in CERN's established channels for the informal or formal resolution of such situations, as appropriate.

Sudeshna Datta-Cockerill

A LONG-TERM URBAN PLANNING VISION

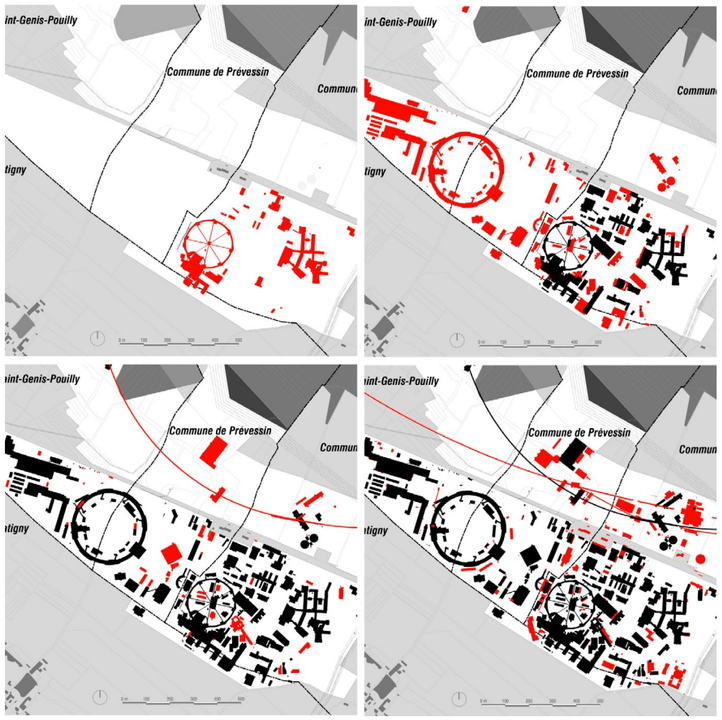
The GS Department is working on a long-term plan for the urban planning of the CERN sites, ensuring that their development takes place using a coherent approach and keeping in mind the need for harmonious integration in the surrounding area.

Visitors are often bemused by CERN's buildings, with their 1950s style and a layout that seems to defy all logic. Up until the 90s, buildings were erected as accelerators were built, with no apparent concern for harmony. But now, with a much larger number of users and installations, space is at a premium, getting around the site is difficult and urban planners are needed more than ever. "Over 9,000 people enter the CERN sites every day and we have 7,500 workstations," says Frédéric Magnin, Civil Engineering and Buildings Section Leader in the GS Department. For this reason, specialists in the department have been working on the development of the sites for five years. It is especially important that they take into account today's more complex local environment. The Laboratory, which used to be a remote site in the countryside, now sits in the middle of an urban area, surrounded by increasingly heavy road traffic. "CERN is now a town within a town, and its urban planning has to take the surrounding villages into consideration," Magnin stresses.

This has led the GS Department to launch numerous initiatives both inside and outside CERN. Last year, the Directorate approved a "Master Plan" setting out CERN's general strategy concerning urban planning, including a development plan for the period up to the year 2030. "This plan concerns all aspects of urban planning, building and the countryside, but also mobility, the environment and energy," says Magnin. "The objective of this overall vision is more coherent development." This master plan will need to be followed by a plan of action, but some concrete actions have already been taken. For example, a special request, called an Infrastructure Project Proposal, is now required for all infrastructure projects. These proposals are examined by the Enlarged Directorate and have to meet a number of criteria. This new procedure should ensure that CERN's projects are more coherent and should lead to better prioritisation CERN-wide.

Outside the Laboratory, CERN has strengthened its links with regional urban planners. CERN's sites, given their locations on major traffic arteries on the French-Swiss border, have a strategic role to play in the France-Vaud-Geneva urban development project, also known as "Grand Genève". CERN is involved in discussions about one part of this project in particular – the Geneva-Saint-Genis-Gex PACA (coordinated urban development zone). In fact, the first public space financed as part of the project, the *Esplanade des Particules*, is directly associated with CERN: the entire area between the Globe and CERN is to be completely redeveloped. This work, which has been delayed, should start early next year. Collaborations with local authorities will also continue on matters including, for example, the tramline project and the creation of cycle paths.

Corinne Pralavorio



The evolution of the Meyrin site over the past 60 years. From top left to bottom right: 1950-60, 1960-75, 1975-85 and 1985-2010.

AGILITY FOR COMPUTERS

I have just made an inventory of all the digital gadgets connected to my wireless network at home: two Windows laptops, two tablets of different generations, my two kids' iPods , one iPhone, an Apple TV, an old iMac, the Wii U, a Sony TV, a Sony stereo, the Wi-Fi router (of course!), a Network Attached Storage and two IP telephones. I'm sure other people have many more…

In the future, I could even have an internet-connected car or coffee-machine or a smart meter and I could eventually even connect my solar panels to my Wi-Fi network. That's quite some phase-space for vulnerabilities waiting to be exploited by attackers!

Therefore, locking down my Wi-Fi router and blocking all incoming access was essential, but my kids randomly browsing the web still posed an insider threat… Thus, patching and keeping all systems up to date became important, too. But given the number of devices, how could anyone expect me to spend all of "Patch Tuesday" – the day each month when Microsoft publishes its newest updates – running around and keeping all our operating systems, firmware and applications up to date? I am already fed up with keeping my iPhone and its apps up-to-date – every second day, so it seems, I am forced to apply new updates to some apps… How would this scale up to a cacophony of devices at home? In short: it doesn't, and it also doesn't work well in a large computer centre like CERN's. This month, Microsoft issued two critical patches: "MS14-066" and "MS14-068". You can imagine how extra-busy many system administrators were (twice!)!

So we need a change of paradigm. Enter: "agility". In the near future, I expect security updates to sneak into my devices clandestinely (if I opt in) in order to keep them up to date and provide protection against exploitation. Patching must become "agile", meaning that updates are automatically pushed and applied once ready*. And they have to be applied to everything: PCs, laptops, smartphones, embedded systems, control devices, and so on – fully independent of criticality. No need to wait for "Patch Tuesday", no more hassle running around pushing buttons, and no more reboots that stop me from working.

We're not there yet, but we should still at least try to become more agile. A good start is enabling services like "Windows Update", Mac's "Software Update" and Linux's "yum auto-update" wherever possible. That means not only on office PCs, laptops and tablets, but also on control devices, SCADA systems, computing nodes, computer centre servers, etc. The more critical a system is, the more we should worry about it not being patched and the more we should invest in enabling prompt and agile patching. In certain, justifiable circumstances, other security protections could be used. We should talk to the vendors of those systems and deploy frameworks to make upgrade management easier. Using Puppet, as we do in CERN's "Agile Infrastructure" for managing the Meyrin and Wigner computer centres, is a good start. Upgrade cycles have become shorter. However, there is still room for improvement as the security incidents connected with "Heartbleed", "Shellshock" and "Poodle" have shown: while most of the servers used in the computer centre and for control systems were fixed quickly, many fringe systems remained vulnerable for another month! Better (and quicker) configuration management is important to prevent those systems from becoming insecure.

So, how agile are your systems? How quickly could you apply a security fix if you had to do it NOW? If the answer is "within a day", congratulations! If the answer is "next summer", we should talk.

**Normal updates for new features etc., however, would still need the consent of the user in order to prevent unwanted functions from being installed.*

Check out our website for further information, answers to your questions and help, or e-mail **Computer.Security@cern.ch.**

If you want to learn more about computer security incidents and issues at CERN, just follow our Monthly Report: **cern.ch/security/reports**.

Stefan Lueders, Computer Security Team

Events

TEDX PLACE DES NATIONS | 11 DECEMBER

On 11 December, Geneva will host the TEDx Place Des Nations.

TEDxPlaceDesNations, in the spirit of TED's "Ideas Worth Spreading" principle, will involve innovators, humanitarians, entrepreneurs, scientists and peacemakers. The eleven speakers will share how their work can help find solutions to today's challenges.

Among the speakers will be Javier Serrano, a CERN physicist and electronics engineer. He is the co-author of the CERN Open Hardware License and the creator of the Open Hardware Repository, a web platform where companies, institutes and individuals can share their hardware designs for free.

Additional information is available at the TEDxPlaceDesNations site: **www.tedxplacedesnations.ch**. The detailed programme will be posted on 28 November. Seats are limited, so registration is essential. The event can be followed by live webcast .

JOHN ADAMS LECTURE | ACCELERATOR-BASED NEUTRINO PHYSICS: PAST, PRESENT AND FUTURE BY KENNETH LONG | 8 DECEMBER

Monday, 8 December 2014 from 2 p.m. to 4 p.m. at CERN (503-1-001 - Council Chamber)

Abstract:
The study of the neutrino is the study of physics beyond the Standard Model. We now know that the neutrinos have mass and that neutrino mixing occurs causing neutrino flavour to oscillate as neutrinos propagate through space and time. Further, some measurements can be interpreted as hints for new particles known as sterile neutrinos. The measured values of the mixing parameters make it possible that the matter-antimatter (CP) symmetry may be violated through the mixing process. The consequences of observing CP-invariance violation in neutrinos would be profound. To discover CP-invariance violation will require measurements of exquisite precision. Accelerator-based neutrino sources are central to the future programme and advances in technique are required to deliver the "headline" long- and short-baseline experiments and the programmes required to minimise systematic uncertainties. I will explain how measurements made at CERN using the first ever neutrino beams shaped the Standard Model, how the exciting neutrino-physics programme of the next decades will depend on advances in accelerator capability and how CERN will continue to play leading and seminal roles in the programme.

Official News

NEW PROCEDURE FOR DECLARING ACCIDENTS RESULTING IN BODILY INJURIES

The HR Department would like to remind members of personnel that, according to Administrative Circular No. 14 (Rev. 3), entitled *"Protection of members of the personnel against the financial consequences of illness, accident and incapacity for work"*, accidents resulting in bodily injuries and presumed to be of an occupational nature should, under normal circumstances, be declared within 10 working days of the accident having occurred, accompanied by a medical certificate.

In an effort to streamline procedures, **occupational accident declarations** should be made via EDH using the "declaration of occupational accident" electronic form.

For the declaration of **non-occupational accidents** resulting in bodily injuries of members of the CERN Health Insurance Scheme (CHIS), a new paper form has been elaborated that can be downloaded from the CHIS website (**cern.ch/chis**), and is also available from the UNIQA Helpdesk in the Main Building.

If you encounter technical difficulties with these new documents which replace the "HS 50 accident declaration" paper form, please e-mail **service-desk@cern.ch**, explaining the problem.

In addition, all accidents occurring on the CERN site, while on duty travel or while travelling between home and CERN should be reported in accordance with Safety Code No. 2 using the EDH Internal Accident Report.

Further information can be found on the "Accidents" procedure page of the Admin e-guide.

HR Department & DG Unit Administrative Processes Section

CHIS – NEW INSURANCE CARDS AND PHONE NUMBERS VALID FROM 1 JANUARY 2015

New health insurance cards will be posted to CHIS members by mid-December. The new cards are valid from 1 January 2015 and will no longer indicate an end date. You may use the card as long as you are member; if lost, a new card will be delivered on request.

From 1 January 2015, please use the telephone numbers printed on your new insurance card:

- **+41 (0)22 718 63 00** for UNIQA's Head Office, available during office hours
- **+41 (0)22 819 44 77** for UNIQA medical assistance and telemedicine, available 24/7
- **+1 844 477 0777** in the event of hospitalisation in the USA, available 24/7

Further information on the new services (UNIQA assistance and telemedicine) is available in the CHIS Bulletin 39, which you will receive at your home address during the second half of December.

Please note that from 1 January 2015:

- You should not call the emergency number 24/24 on your old insurance card, as this service will be discontinued.
- You no longer need to obtain a separate insurance card from Medsave prior to your travel to/stay in the USA. In the event of hospitalisation, calling the dedicated telephone number on the back of the new insurance card is sufficient to benefit from the favourable hospitalisation conditions.

HR Department

CHIS – SERVICES AVAILABLE DURING CERN'S END-OF-YEAR CLOSURE

The UNIQA Helpdesk at CERN, which has been temporarily relocated to Building 510, will be closed during CERN's end-of-year closure (20 December 2014 to 4 January 2015).

During this period, UNIQA's Head Office in Geneva will be open from 8 a.m. to 5 p.m. on 23, 24 (until 4 p.m.), 26, 27 and 30 December 2014 and on 2 and 3 January 2015. The UNIQA Helpdesk at CERN will open again on 5 January 2015 and its opening hours have been extended:

Monday to Friday: from 9 a.m. to 1 p.m., and
Tuesday and Thursday: from 2 p.m. to 4p.m.

During the end-of-year closure, the following services are also at your disposal:

Until the end of 2014: the telephone numbers printed on your old insurance card:

- +41 (0)22 718 63 00 for UNIQA's Head Office, available during office hours only (see above).
- +43 512 224 22 for Tyrolean Air Ambulance - urgent medical assistance 24/7.

From January 2015: the numbers printed on your new insurance card:

- +41 (0)22 718 63 00 for UNIQA's Head Office, available during office hours only (see above).
- +41 (0)22 819 44 77 for UNIQA medical assistance and telemedicine 24/7,
- +1 844 477 0777 in the event of hospitalisation in the USA, available 24/7

HR Department

106TH ACCU MEETING DRAFT

Agenda for the meeting to be held on Tuesday 2 December 2014 at 9:15 a.m. in room 60-6-015:

1. Chairperson's remarks
2. Adoption of the agenda
3. Minutes of the previous meeting
4. News from the CERN Management
5. Report on services from the GS and IT Departments
6. The new approach to the CERN Safety Policy and Safety Organisation
7. Recent developments in dosimetry & medical services support for Users
8. Progress on Health Insurance for Users
9. Users' Office News
10. Matters arising
11. Any Other Business
12. Agenda for the next meeting

Anyone wishing to raise any points under "Any Other Business" is invited to send them to the Chairperson in writing or by e-mail to **ACCU.Secretary@cern.ch.**

Michael Hauschild (Secretary)

ACCU is a forum for discussion between the CERN Management and representatives of the CERN Users in order to review the practical means taken by CERN to support the work of Users of the Laboratory. The User Representatives to ACCU are:

- **Austria** M. Jeitler (manfred.jeitler@cern.ch)
- **Belgium** M. Tytgat (michael.tytgat@cern.ch)
- **Bulgaria** S. Piperov (stefan.piperov@cern.ch)
- **Czech Republic** S. Nemecek (Stanislav.Nemecek@cern.ch)
- **Denmark** J.B. Hansen (Jorgen.Beck.Hansen@cern.ch)
- **Finland** K. Lassila-Perini (KatriLassila-Perini@cern.ch)
- **France** F. Ferri (Federico.Ferri@cern.ch) A. Rozanov (Alexandre.Rozanov@cern. ch)
- **Germany** A. Meyer (andreas.meyer cern.ch) I. Fleck (fleck@hep.physik.uni-siegen.de)
- **Greece** D. Sampsonidis (Dimitrios.Sampsonidis@cern.ch)
- **Hungary** V. Veszprémi (Viktor.Veszpremi@cern.ch)
- **Israel** E. Etzion (Erez.Etzion@cern.ch)
- **Italy** C. Biino (Cristina.Biino@cern.ch) C. Troncon (Clara.Troncon@cern.ch)
- **Netherlands** G. Bobbink (Gerjan.Bobbink@cern.ch)
- **Norway** J. Nystrand (Joakim.Nystrand@cern.ch)
- **Poland** K. Bunkowski (Karol.Bunkowski@cern.ch)
- **Portugal** P. Bordalo (Paula.Bordalo@cern.ch)
- **Romania** G. Stoicea (Gabriel.Stoicea@ cern.ch)
- **Serbia** D. Lazic (Chair,Dragoslav.Lazic@cern.ch)
- **Slovak Republic** A. Dubnická (Anna.Dubnickova@cern.ch)
- **Spain** S. Goy (Silvia.Goy@cern.ch)
- **Sweden** A. Ferrari (arnaud.ferrari@physics.uu.se)
- **Switzerland** M. Weber (michele.weber@cern.ch)
- **United Kingdom** M. Campanelli (Mario.Campanelli@cern.ch) H. Hayward (helen.hayward@cern.ch)
- **Non-Member States** E. Torrence (Eric.Torrence@cern.ch) B. Demirkoz (Bilge.Demirkoz@cern.ch) M. Sharan (manoj.kumar.sharan@cern.ch) N. Zimine (Nikolai.Zimine@cern.ch)
- **CERN** E. Auffray (Etiennette.Auffray@cern.ch) R. Hawkings (Richard.Hawkings@cern.ch)

CERN Management is represented by Rolf Heuer (Director General), Sergio Bertolucci (Director for Research and Computing), Sigurd Lettow (Director for Administration and General Infrastructure). Physics Department is represented by Catherine Decosse and Cecile Granier and by Doris Chromek-Burckhart (Head of the Users' Office), Human Resources Department by Ingrid Haug, the General Infrastructure Services Department by Reinoud Martens, the Information Technology Department by Mats Moller, the Occupational Health Safety and Environmental protection Unit by Ralf Trant, and the CERN Staff Association by Michel Goossens.

Secretary: Michael Hauschild.

Other CERN Staff membersattend as necessary for specific agenda items. Anyone interested in further information about ACCU is welcome to contact the appropriate representative, the Chairperson or the Secretary (73564 or **ACCU.Secretary@cern.ch**).

http://cern.ch/ph-dep-ACCU/

PENSION PAYMENT DATES IN 2015

The pension payment dates for next year are also available on the Pension Fund website: pensionfund.cern.ch

Pension payment dates in 2015 :

Wednesday	7 January
Friday	6 February
Friday	6 March
Tuesday	7 April
Thursday	7 May
Monday	8 June
Tuesday	7July
Friday	7 August
Monday	7 September
Wednesday	7 October
Friday	6 November
Monday	7 December