You and Your Observatory — The ESO Users Committee

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The European Southern Observatory is an international organisation serving a large scientific community. Financed by its member states, its facilities are open to all professional astronomers around the world. ESO and its users form a partnership, aimed at maximising scientific progress: ESO provides the infrastructure and logistical support, and the users carry out the most exciting measurements and publish these in a timely fashion in respectable journals.

The Users Committee (UC) is an advisory body set up to liaise between the users and ESO. Now a well-established institution, its 33rd annual meeting took place on 27 and 28 April 2009 at ESO Headquarters in Garching. It is seen by some as a platform for users to tell ESO what they think of it, but it is also used by ESO to inform users and, increasingly, to ask users for input into some of their initiatives. My personal view is that the role of the UC is to facilitate the collaboration between ESO and its users, where ideally most interaction would take place in a natural way outside the UC.

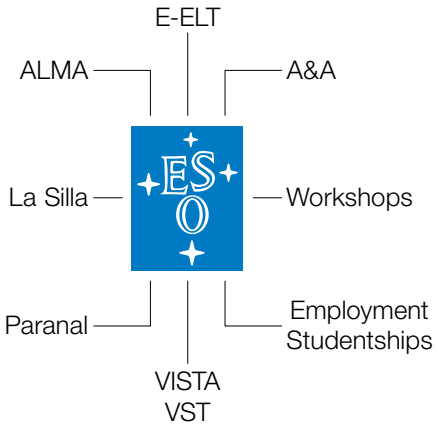

Figure 1. Summary of the services provided by ESO. ESO not only constructs and operates the most powerful telescopes at some of the best sites on Earth, but also provides various other services for the benefit of the scientific community.

Things that have remained the same over the past eight years

Lutz Wisotzki last described the role and functioning of the UC in 2001 (Wisotzki, 2001). Many features remain the same. The UC still has the same remit, to advise ESO of the views of its users, and to help ESO communicate with its users. UC members are appointed by the Director General, and normally serve for four years. Each member state, as well as the host country, Chile, is represented by one UC member. The UC and representatives from ESO meet for two days each year to discuss user feedback reported in end-of-mission forms or made known to the UC in other ways, and to discuss updates on telescope operations and developments, usually through presentations made by ESO staff. Each year there is a special topic, to allow time to go deeper into a more specific issue, for which ESO invites specialist users to that part of the meeting. This year's special topic was "Target of Opportunity and Rapid Response Mode".

There are two important ways in which this meeting becomes effective, and both parties become accountable: firstly, the minutes are made public online[1]; and secondly, the UC proposes, and ESO agrees, on a set of action items and recommendations. Progress on these action items and recommendations are reported at the next meeting.

Things that have evolved over recent years

Over the past decade, ESO has grown enormously. When I returned home from an ESO studentship twelve years ago, the VLT had yet to start operation. Now, Cerro Paranal is a fully mature observatory site, with an increasingly powerful interferometer, ready for its second generation of instrumentation and two wide-field survey telescopes poised for operations. ALMA is on the doorstep, and the E-ELT is becoming a reality. ESO employs more people than ever before and new buildings are planned on the Vitacura and Garching premises.

Importantly, also, new member states have acceded. After the United Kingdom joined early this century, Finland, Spain and the Czech Republic have followed suit, and Austria is being welcomed as the youngest ESO member state. This means that the UC has increased in size, both in terms of the number of its members and the size of the community it directly represents (see Table 1 for a list of the current members). The enlarged ESO user community no doubt contributes to the continuously growing demand on telescope time, presenting both ESO and its users with serious challenges.

The way in which feedback is gathered from users has also evolved. End-of-mission forms are now also solicited from the principal investigators of service mode programmes, and the UC annually polls users through an online questionnaire about two months before their meeting. The UC collects all feedback from each of the representatives and the UC Chairperson sends this to ESO in advance of the meeting, accompanied by a summary of the feedback and users poll.

Likewise, ESO prepares factsheets for the UC, which summarise statistics of telescope demand and usage, etc., and reports on recent developments within the various ESO departments. ESO, as well as the UC, certainly take their roles very seriously — this is reflected not least in the fact that most ESO personnel in charge of relevant divisions participate in the meeting, including the ESO Director

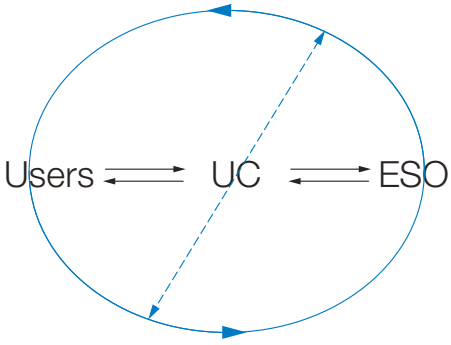

Figure 2. The role of the UC. The ESO Users Committee acts not just as a relay station between the users and ESO, but more importantly as a mechanism for facilitating direct interaction between ESO and its users.

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Switzerland	Frederic Courbin	Frederic.Courbin@epfl.ch	(until 2009)
United Kingdom	Jacco van Loon	jacco@astro.keele.ac.uk	(Chair)

Table 1. The Users Committee currently has 15 representatives.

General (DG). Users should thus be reassured that their voice is heard and the DG is open to discussion. The ESO DG sets high standards for his employees, and encourages the UC and ESO users in general to set similarly high standards for themselves. This has proved a constructive approach, and matters are being attended to rapidly nowadays.

The UC has assumed an active role in contributing to ESO, in an attempt to transcend the stigma of a complaining and demanding "trade union". I am a strong believer in sharing responsibility. Hence, for the past year the UC has also set action items for itself, for instance to help ESO advertise new features or to solicit input from the community on specific issues. I have also called for a teleconference between the UC and a select number of ESO representatives, offset by half a year from the annual face-to-face meeting. This allows for much more continuous interaction, and has no doubt contributed to the accelerated pace at which action items are being addressed (resulting in the fact that most past action items could be deemed closed at the recent annual meeting).

My predecessor introduced an informal teleconference between the Chairpersons of the UC, Observing Programmes Committee (OPC) and the Head of the Observing Programmes Office (OPO). These now take place shortly before each OPC meeting. They should allow the UC to learn about OPC procedures for that semester, and to inform the OPC Chairperson of user feedback related to the proposal submission and evaluation process. This should increase the sense of "ownership" of the time allocation process, as user feedback sometimes gives the impression that the users are alienated from this process, whereas in actual fact the OPC is composed entirely of ESO users. In that respect, I would urge anyone being asked to serve on the OPC or its subpanels to accept — one learns a lot, besides performing an important task for ESO and ultimately oneself.

Examples of recent and current burning issues

There have been several recurrent items on the UC meeting agenda of late, some of which have now been addressed, whilst others require more resources and setting of priorities.

A recent success story is that of the timely access to service mode data. Previously, principal investigators had to wait until the end of the semester before they received their data, on disc. This delay between the time of the data acquisition and the time when it could be analysed sometimes led to missed opportunities, e.g., to correct observing strategy, to prepare for follow-up observations, or simply to publish rapidly. In particular, users with access to other observatories where data were made accessible within a day or two (or even quicker) could not understand why ESO could not deliver the same service. This was at least in part due to the way the data flow was organised, the way the ESO archive operates, and the fixation on data quality assurance. The recent addition of the User Portal now provides the necessary interface for data exchange between the archive and the user, and initially this made access possible within around ten days, after validation by ESO personnel. For many applications, in particular exploiting the highly successful rapid response mode for the observation of fast transients, this was still far too slow. Less than a year later, ESO is now offering access to unvalidated (raw) data within half an hour or so. Faster access will require a high speed data-link between Paranal and the intercontinental grid. The archive and User Portal interface are also subject to continued development, promising simpler retrieval of associated calibration data and easier access for co-investigators.

Another pertinent item that enjoys continuous attention is the availability of data reduction tools. In the past, ESO developed Midas as a software environment within which it offered recipes for reducing imaging and spectroscopy data obtained with ESO instruments (generic enough to often also be useful for data obtained at other observatories). However Midas has not been the preferred software environment for some time now. Instead, ESO has concentrated on developing data reduction pipelines for its VLT instruments, but for the main purpose of data quality control — not to produce science products. Users have felt left to their own devices when it comes to reducing their data, and this causes not only frustration, but is also a waste of time and resources and has ultimately reduced scientific productivity. That said, it is a huge undertaking to provide dedicated software for each and every mode

of the many diverse and advanced instruments that have come into operation at the four VLT telescopes, and priority was given to ensuring the correct operation of these instruments and the requisite quality of the products that enter the ESO archive. Limits to resources continue to play a role, but over the past year ESO has demonstrated a clear intent to provide (or require instrument teams to provide) reduction tools that produce science-grade data products. In some cases this may be in the form of a science-grade pipeline — certainly a prerequisite for reducing the extremely high data flow expected to come from the survey telescopes or from highly multiplex instruments. ESO is also working towards developing recipes that can properly treat the data reduction steps that are standardised in current pipelines. The UC welcomes the electronic forum set up for users to discuss issues with regard to data reduction[2]. This could be a great way for users to provide input and help achieve what they have been asking for.

Challenges and opportunities that lie ahead

There are big challenges lying ahead, but these also present great opportunities, where users can make a real positive difference. Some of these are associated with the changing landscape of observing facilities that ESO can maintain. Therefore, the UC decided to poll the users this year on their views regarding currently available and future telescopes and instrumentation.

The future of La Silla and ESO's support for "small" telescopes has been a worry for a significant fraction of the user community for some time. This has recently been exacerbated by the steep rise in telescope time applications and pressure factors on some telescope/instrument combinations exceeding that of space-borne observatories. It is felt desirable to improve the balance between the pressure on different telescope/instrument combinations (and to avoid as far as possible "unreasonably high" oversubscription rates), and La Silla might be part of a solution of this delicate and not trivial "luxury problem". La Silla is still operated by ESO, and there are no plans for this to change in the foreseeable future. However, a streamlined and, by necessity, more limited operation model has been adopted, and efforts have concentrated on a smaller number of productive telescopes and instruments (see the article by Saviane et al. on page 18). La Silla welcomes large programmes, which can last up to twice as long as large programmes at Paranal, as well as visitor instruments, and it responds kindly to consortia interested in operating some of the remaining telescopes. The UC will continue to work with ESO to look into ways in which users can be offered alternatives to the heavily oversubscribed VLT, and we are currently pursuing the idea of combined programmes for La Silla telescopes, which could overcome the minimum three-night rule by sending a single observer to execute a number of programmes that would otherwise be too small. This could also be an effective way of training novice observers, training the next generation of astronomers surely being part of ESO's directive.

Also with a view towards the new instrumentation choices that will be made for existing and upcoming ESO facilities, we are trying to improve the communication between the user community and the Scientific and Technical Committee (STC). The latter makes recommendations to ESO as to its strategy for telescope and instrument development. To ensure that the STC has all the information it needs, the UC sees a role for itself in providing the STC with the views and expectations of the (prospective) users of ESO facilities. The results of this year's users poll pertaining to the STC's remit have been prepared and will be relayed in an effective format to the STC. One clear general result emerging from this exercise was that the ESO scientific community clearly echoes the cultural diversity of Europe: a certain field of research may dominate the research agenda of one country, but the situation will be very different in another country, and this is often reflected in the popularity of instruments that best suit the respective research requirements.

If only for this reason, it is probably a good thing that ESO's committees generally have one member from each country rather than proportional representation, which would lead to committees dominated by the larger member states. In a similar vein, I am very happy that the representative of the newest ESO member state, Austria, has agreed to serve as Vice-Chairperson on the UC (see Table 1). Lastly, I believe that European (and Chilean) astronomers have good reasons to consider themselves very fortunate to benefit from ESO, and I am confident that they can — and will — help make ESO even better.

References

Wisotzki, L. 2001, The Messenger, 106, 46

Links

[1] Overview of UC meetings: http://www.eso.org/public/about-eso/committees/;
[2] See the announcement on page 75 and refer to http://www.eso.org/sci/data-processing/forum.html