The VLT Software Workshop

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In May 1997 ESO has organised a first workshop on writing software for the VLT and its instruments, addressing thereby the needs of various consortia and also newly recruited ESO software engineers. Since then, the important milestones of the first light for Antu (UT1) and Kueyen (UT2) and a couple of instruments have been reached, showing that specifications have been met or even exceeded. This achievement was possible also thanks to the consistent and rigorous application of software engineering methodologies, use of common software and imposing software standards. All this makes the VLT software very homogeneous and robust.

The first instruments (Test Camera, FORS and ISAAC) of course all use the same common base layers of software. They also show how important it is to have common concepts at a higher level, so that e.g. the same user interface (BOB) can be employed for all of them. The successful commissioning and operation of these instruments demonstrate that both in-house development (Test Camera and ISAAC) and development by consortia (FORS)

Figure 1.

can be suitable approaches. A clear requirement is surely a close collaboration between the Institutes and ESO. An integral part of that is ESO's commitment to provide and maintain the so-called VLT common software.

There is a lot more software in the makes for the VLT: while several VLT instruments and in particular the code driving them are currently being developed, others are in the preliminary or conceptual design phase. Also VLTI requires a considerable implementation effort. For that reason, ESO set up a second workshop on both VLT Control and Data Flow software, from Wednesday 21 April up to and including Friday 23 April 1999. The targeted audience were software engineers of ESO, consortia and contractors. Most of the software staff of the technical and DMD divisions contributed to the workshop, which was organised by P. Biereichel and myself.

The first day most of the VLT Common Software components were introduced by means of a practical task: build an application that is compliant with the VLT control software standards. The second day consisted of several rather in-depth presentations of instrumentation software components, and several CCS software modules. There was also a show-around for UVES (which at that point was almost ready for shipment to Paranal) and the VLT Control Model (the computers and some other hardware used at Garching to simulate a VLT unit telescope). The third and last day was filled mainly with presentations on data-flow software, and some more tutorials about the panel editor and software engineering.

The participants were apparently not frightened by the information density as announced in the workshop's agenda, and a total of 38 engineers registered – about double the amount of the 1997 workshop. And the large majority of these 38 participants followed attentively and enthusiastically until the very end. Shortly before closing, a group picture was taken in the ESO headquarters reception area, in front of the auditorium where the presentations took place (**see photos**).

The handouts of the various presentations are also available in electronic format. You can access them via the URL http://www.eso.org/projects/vlt/sw-dev/workshop/. The same goes for the demo software used during some of these presentations.

We want to thank all participants for their interest, their questions and suggestions. This has been a good opportunity to "spread the word", introducing the concepts to some, re-enforcing methodologies for others, drawing the goal of writing VLT-compliant software a lot nearer.

Figure 2.