THE SCOOP

THE OFFICIAL VERTUAL NEWSLETTER

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CONTENT

Message from the CEO

by Debra Leeves, CEO

Part of my role as CEO is to ensure that Vertual keeps moving forward, and this means developing new products and solutions that meet our customers' needs today, and just as importantly for the future too. One of the things we learned during the Covid pandemic years was that our customers wanted more flexible teaching solutions, both for themselves and the students they teach. We know that teaching methods are continually changing, and students particularly want the flexibility to be able to learn at their own pace, in their own time, away from the 'classroom'. Remote access to VERT software was something we started to think about a few years ago, and once the pandemic started, we accelerated development work to bring you a product we've called 'VERT on Demand'. We've incorporated the main features you asked for and full details are inside this newsletter. We think you'll love it. We've also updated the VERT software, and VERT 7 is ready to be launched, which incorporates a lot of new features to meet your teaching needs.

Having met a lot of our VERT users earlier this year in Vienna at ESTRO, we're counting the weeks now until we meet our users on the other side of the world at ASTRO in San Diego. We will be demonstrating all our new software at the conference including VERT on Demand, VERT 7, Physics Flex and VERT Flex, so do come along and have a demo. In parallel to ASTRO, we will be exhibiting at ASRT, San Diego from 1st-3rd October. I'm looking forward to welcoming you to both events.

VERT 7 is here!

by James Ward

As I write this, we are busy putting the finishing touches to our latest VERT software release, VERT 7, which will shortly be launched at the ASTRO exhibition in San Diego later this month!

This new version features some useful improvements to Virtual Presenter and the Interactive Question Slides. For example, we have included some time saving features such as being able to Copy & Paste text into questions, and the ability duplicate slides, which can make it quicker and easier to create interactive questionnaires. We have also added an option to save the user's answers to a PDF report, which includes automatic scoring of the questions. Another nice feature is that a Virtual Presenter slide can be made to automatically show or hide the "Internal Web Browser", and to open that on a particular "page". For example, this can be convenient way to have the slideshow automatically show the VERT Physics controls. Also, if there are unsaved changes in a slideshow, the software will now display a star on the Virtual Presenter window, to remind you to save your work.

With this release we will also be including a new "Sample Plans 5" collection, which includes 2 Brain Mets plans, Stomach, Head and Neck and a new 4DCT lung plan also. This brings the total to over 50 sample DICOM plans included with the VERT software, plus another 15 Proton plans for those with Proton VERT. I hope these will be a useful resource for you, but please do let us know if there is anything else you would like to see included in future.

Following the introduction of 4DCT support in VERT 6, we have been making further improvements to the 4D functionality, including improved compatibility with a wider range of 4D plans, improvements to the user interface to make this feature easier to use, and we are also developing support for 4D animated structures in the 3D view.

The Image Matching Interface sees the addition of a new "Region of Interest" tool in VERT 7. This often requested feature is intended to be used as a visual aid to demonstrate the ROI.

Whilst it does not influence the simulated auto-matching (which is based on the known position of the patient), it allows the ROI to be repositioned and adjusted in all three views and can be used with a student to discuss how the placement of the ROI will affect the quality of the match.

In addition to supporting the authentic Linac Hand Pendants in VERT, we have now added "Virtual Pendants" for Varian TrueBeam and Elekta Linacs. Essentially, this is a realistic on-screen simulation of the hand pendant, including the usual buttons and thumbwheels, which can be operated with the mouse. Whilst this can obviously be useful on a Laptop or Desktop PC where you might not have the physical pendant, it can also be a convenient way to demonstrate the controls on screen.

We will also shortly be releasing an optional SGRT upgrade, which includes 3D virtual reality models of the camera (including the light pattern projected on the patient) and provides an authentic working simulation of a typical SGRT user interface. This includes error bars (or "deltas") that will respond interactively to the patient and couch positional errors, with red/green colour bars to show when these are outside/inside the tolerances.

Whilst I haven't covered every new feature here, I hope this will give you a flavour of what to expect in the next version. We are always pressing forwards and, as we wrap up the development of VERT 7, we are already starting to plan for the next release. As always, I would love to hear your feedback and suggestions on what you would like to see next, whether that is new software functionality, sample content, technical support, or training. If you have an opportunity to attend ASTRO, please drop by our booth and we would be delighted to show you the new version in more depth.

Founder's Corner: VERT On Demand – A New Dimension to VERT
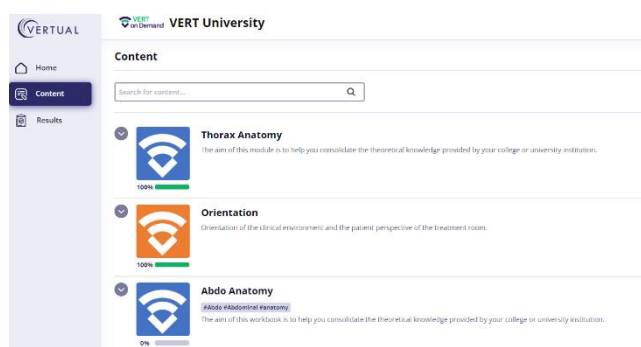
By Andy Beavis

It is always interesting to talk with colleagues about their experiences and challenges with training and listening to those future colleagues who are coming through that initial period of their careers! At some recent meetings I had the chance to sit and discuss how we had 'fought the pandemic fire-fight', come out of the other side and how we had brought some of those ideas into our teaching and training expectations. We work in a profession wherein we continually evolve practice, sometimes at different rates, and look for new possibilities, as an 'improvement junkie' or someone who strives for better ways to bring benefit to what we do, rethinking VERT delivery is a fun topic. We are about to launch a new product, which has been in development for a couple of years and embraces a few of the ideas we had during the pandemic years and since then. We hope it will provide you with variations to your teaching/ training arsenal that you will find indispensable and will be able to embrace and adopt to both your own and your student's advantage.

As stated before in Founder's Corner, we are always keen to get feedback from the VERT User family and we do try to incorporate these ideas. One of the obvious requests we have had, particularly in these recent years, was for remote access to VERT. Since the world settled back into its new norms it became clear that the future would retain this alongside the traditional 'in classroom' teaching. Over the years we have been asked if it would be possible to create more tools in VERT to assess students' progress or their competency / knowledge. We have provided various 'workbooks', almost exclusively by collaboration with Users who were interested to develop these for either teaching or for Continued Professional Development usage. Finally, at least in the context of this discussion, we listened to those of you who told us that you'd like to give the students more access to VERT, but were concerned that they might not get the full benefit given a 'lack of expertise' in operating the VERT software.

We really liked these ideas and have been working on them for the last couple of years. VERT on Demand is our new product that provides these facilities in a hybrid solution. It is used as an adjunct to your tradition classroom use of VERT and allows the students to have more access to VERT, in their own time and at whatever pace they prefer. Their access is provided by 'the Cloud', or more precisely they sign on to https://vod.vertual.co.uk using their own computer, tablet or device of their choice. The software is hosted on our server and therefore the only technical specification they/ you need to consider is access to the internet! Their access is monitored via individual logon details (their email address) and a password which is all configurable by the training programme leadership or colleagues at the Institution.

Having signed on, the students will see a list of assignments that you have set them to complete. These assignments can be thought of as chapters in electronic workbooks, with sub-sections that concentrate on specific content. For example, we might sign on, click on the *IMRT* assignments and then choose to work on the *Prostate techniques* exercise, or click on the *Safety in Radiation Therapy* assignments and open up the *Breast mistreatment* exercise. The student is presented with a progress bar to show how far through these assignments/ exercises they are along with any introductory information. Alongside each exercise is an icon that when clicked will launch VERT and enable the student to work on the task given to them.

The content of the electronic workbooks/ assignments and all their associated exercises are under the total control of the programme faculty. Each faulty member has a higher level access that allows them to monitor the progress of all the students and to configure the content the students will see. This also allows configuration of the way VERT on Demand is presented to the students, i.e. the Institution's own branding can be used, and detailed information relating to the course can be added. We will provide training in how to manage the student access, how to create the workbooks/ content and will be delighted to provide assistance in building material or work alongside you to achieve it. Of course, in Vertual tradition, we provide examples that serve as templates or initial material. Content can be shared with other Users, for example if Institutions wished to work collegiately in producing content to reflect the National Curriculum; Vertual would facilitate that if the User base were to find it useful.

The process to create the assignments uses the significantly updated Virtual Presenter feature in VERT. The updates include: information slides that can contain images of any description or instructional text; a host of 'question template' slides which provide 'MCQ', 'missing word', free text or numerical answer type questions . These have elevated Virtual Presenter to an 'e-learning' feature that can be used to test the students' knowledge. However, in the context that they are used in conjunction with a live VERT session (on the student's own computer, at home, ….) they can be set up to get the student to work through a particular situation (for example the Breast error described in the last newsletter) and comment on specific probe questions or establish the 'obvious' issues/ worries that have become evident. This allows the knowledge test to be more than the ability to repeat didactically taught information and to test the extent of the students' experiential learning or competency acquisition, fundamentally their real understanding! In this way, each student will get the same test, presented in exactly the same manner as each of their peers, which mirrors traditional exam ethics whilst embracing novel methodology.

Within VERT on Demand, the answers given by the student are saved on the server and are accessible to the faculty. Simple questions with definitive answers (defined in the configuration process) can be scored automatically.

All the student provided information can be collated into a PDF report and saved, thereby creating a transcript or report of that exercise and be used in the student's overall assessment.

Finally, as stated above, we have addressed the concern that the students may not feel confident in remembering where all the features are in VERT or that 'setting' up the scenario for the exercise might be considered complicated or time-consuming. In actual fact, a preview of the feature described here has been available since VERT 6 and to all with access to that version. The icon clicked in the VERT on Demand interface will launch VERT with a specified machine type, specified patient and load the appropriate Virtual Presenter file. In doing so, the appropriate environment is created for the student to undertake the defined exercise. As discussed in the last newsletter, this includes the creation and 'hiding' of patient set-up errors or any machine miscalibrations and errors that might be relevant to the exercise.

The licence for VERT on Demand is an annual subscription based model and can be scaled for different course sizes and anticipated monthly usage. It assumes current ownership of VERT, however we have created a Flexible subscription for the core software that can be used with VERT on Demand for new users and configured towards Physics Teaching Programmes.

It is always a pleasure to be able to present or write about the developments that we have created in VERT and we hope that you will find this new product will add value to developing your use of VERT. The development of these new features and the integration of them into the new product platform has been a team approach by many of the team at Vertual and we as Founders are very proud of what has been achieved. As always (!) we would really value feedback on this new product and the concept, please let us know about foreseen challenges in implementing VERT on Demand. We would love to work closely with some early adopters and would recognise the collaboration in practical and pragmatic ways.

One question we would really like to better understand is how many hours per month would the students likely use the system and what would the variations in access over the academic year be. We wish to ensure VERT on Demand adds value to your programme and is accessible to you and your students, so all discussion with be helpful.

If you are lucky to be visiting ASTRO or the ASRT meetings, please come to the booth to meet with us and share your experiences, thoughts and ideas about the use of VERT and all your good news and what is good with the world.

ASTRO 2023

Vertual is exhibiting at the upcoming ASTRO conference in San Diego, California. If you are attending, visit us at booth 3331.

UWE Bristol

By Tamsyn Vivian

Recently, I visited UWE Bristol to provide some update training as part of their Immersive system Hardware Refresh. UWE have been a customer since 2008 and are proudly one of our reference sites. Their recent upgrade saw the whole system being upgraded as well as including new modules such as Physics 2 and Proton therapy.

Robin Jhagra has successfully implemented VERT as part of the core teaching at UWE and as cohort numbers are growing, VERT has been a necessity in simulation weeks. Robin has also been developing a SABR project with Vertual which is coming soon!

A special thanks to **WE are XR** for installing this project, fantastic work!