

## ADVANCED SIMULATION BRINGING HELICOPTER CREW REALITY TO LIFE

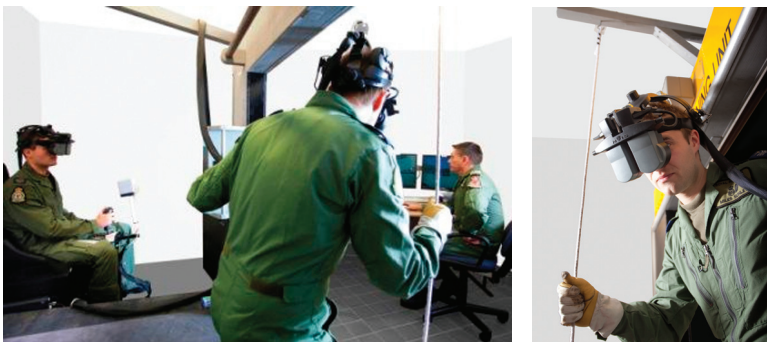
### Immersive Helicopter Training

Virtalis can provide you with an off-the-shelf package to deliver immersive helicopter crew co-operation and rear crew training. We offer options for helicopter type, landscapes and other features which give you a custom, best fit solution. Our Helicopter Crew Reality (HCR) solutions at RAF Valley (SARTU) and Shawbury (DHFS) provide robust and reliable evidence for the quality, flexibility and affordability of our systems.



### Risk-Free Flexible Training Environments

Conceived as a VR training environment for helicopter rear crew, HCR now provides a realistic, virtual environment in which the whole crew can develop skills in team-wide communication during complex training missions. The financial benefits of an improved training capability in a risk-free environment, with a system that can be tailored and reconfigured to give different scenarios and used at any time of day or night, guarantee a rapid payback.



### KEY BENEFITS:

- Immersive and realistic, with physical cabin mockup
- World's first trainer for winch operation and underlung loads using fixed and pendant hoist controls
- Train for engine and winch failure, too dangerous for real life exercises
- Improve crew communication
- Multiple moving targets
- Wide range of land, sea and cliff scenarios
- Varying environmental, lighting and sea states
- Full flight debriefing
- Enhanced training quality and value of flying hours
- Reduce costs

# SOLUTIONS FOR PILOT AND CREW...

## STANDARD PACKAGE INCLUDES:

- Physical structure representing single/dual access rear door area of a helicopter in conjunction with an immersive VR ACTIVESPACE system (head-mounted display and tracking system). Linked by PCs, the student's HMD view is duplicated on the trainer displays.
- The Instructor's Scenario Control interface is a multi-window, point-and-click display that allows instructors to pre-program, run, monitor, save and replay scenarios. The instructor (or pilot) flies the helicopter with a joystick, responding to the student's commands and can use a "God's Eye View" or virtual camera.
- A virtual model of the Bell 412.
- The world's first winch operation simulator, with added underslung load capability, using fixed and pendant hoist controls, allows for full SAR and logistics scenarios: winch failure, jam and runaway and engine failure emergencies can be simulated, with a physical cable cutter switch included.
- Photorealistic 3D landscape and seascape with environmental conditions including sea states 1 to 6 (unbelievably realistic waves!) and variable levels of rain, fog and lighting. Accurate shadows enhance realism.
- Multiple moving target objects include military trucks, barrels, injured civilians, stricken vessels, life rafts, oil tankers, oil rigs and cruise ships.
- Full 1 year hardware and software warranty support.

**"Helicopter crews must be able to communicate as a team, learn the set procedures within the cockpit and cabin, judge distances and be consistently safe. We've had only positive feedback for HCR from our students. HCR's realism is such that by the time they fly training missions, they are already much more advanced than they used to be, so are able to develop more quickly during their time in the air. There is no doubt it has saved flying hours while enhancing training quality, thereby reducing costs".**

**Group Captain Jock Brown, Commandant of The Defence Helicopter Flying School.**

**"The trainer has exceeded all our expectations. The graphics on the system are superb and, as a result, we are now delivering the kind of ground based and remedial training we had never thought possible".**

**Sq. Leader Sam McDonagh, MoD.**

**"HCR is just amazing. We can see at once whether the crew are scanning correctly and using the right techniques".**

**Chief Flying Instructor, Commander Mike Greenland.**

## UPGRADE OPTIONS INCLUDE:

- Additional helicopter models.
- Immersive capability for the pilot training station so that the crew can work together in a virtual world, supported by a PC Cluster.
- A classroom environment can be created by linking in a big screen display system (an ACTIVEWALL) supplied and installed by Virtualis.
- Streaming landscapes and extra features can be constructed in detail from digital terrain elevation data and aerial photographs. We can usually include any other visualisation request you have!
- Integrated part-task gunnery trainer for fundamentals of ballistics and aiming of door-mounted weapon.
- Incorporate night vision goggles (NVG) and handheld white light.
- Additional equipment warranty cover (up to 3 years) and support (indefinitely).



The virtual simulation trainer, by immersing the pilot and rear crew, gives a wholly believable environment.



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