

New holographic radar system can track high speed shells

September 23 2011, by Bob Yirka

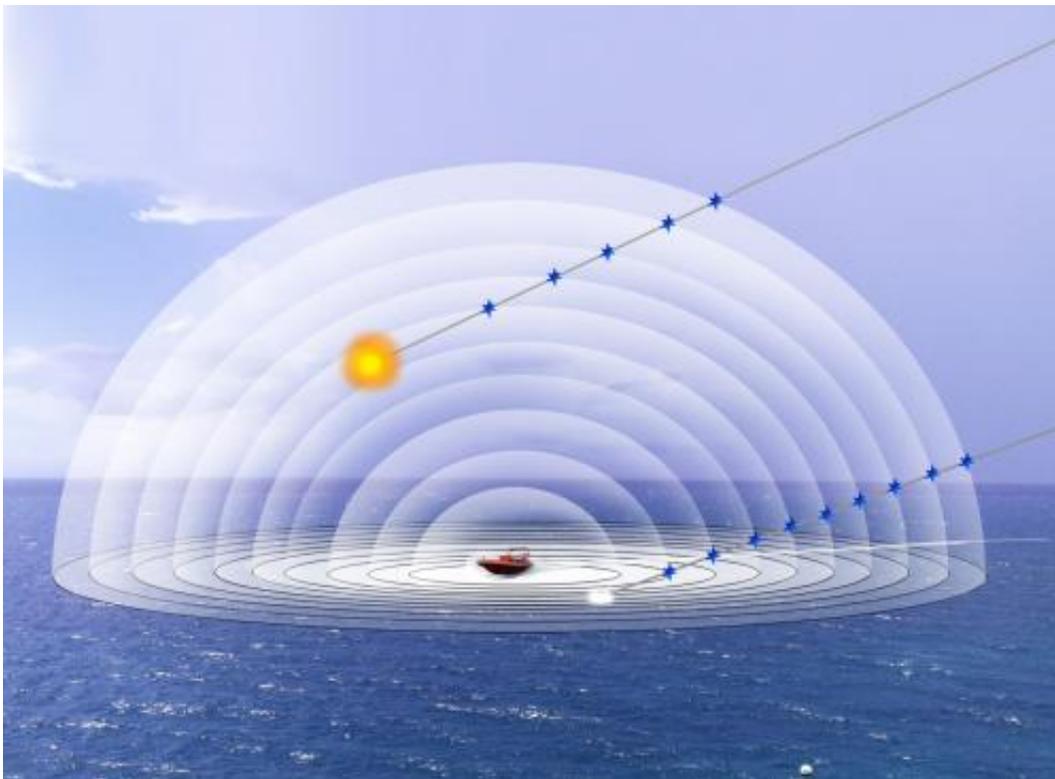


(PhysOrg.com) -- The British firm Cambridge Consultants has announced the successful test of its new 3D holographic radar system that can track fired shells traveling up to 1000 miles per hour. The new system called the Land and Surface Target Scorer (LSTS) and developed for the U.S. Department of Defense (DoD), is expected to help lower the cost of training and hopefully defend against small high speed enemies.

One of the costs associated with training [military personnel](#) is in the constant replacement of targets. To get around this problem, the DoD

sent out a request for development of a system that would allow for shooting at “off-sets” - positions that are close enough to the [target](#) to measure hits versus misses, without damaging the actual target. To achieve good results in such a system, a trainee would need to see not just where the shells he’s firing are landing, but the trajectory they take in getting there. Such information helps in plotting where to send the next rounds so as to move ever closer to the intended target, improving accuracy in the process.

To address the problem, engineers from Cambridge Consultants designed an entirely new kind of radar; one that uses 3D technology to create a realistic holographic image in real time that shows the trajectory of rounds fired as well as where they burst in the air or when they hit a target; all of this in a 360° image.



The biggest hurdle the team faced was in differentiating the shell it was tracking from surrounding “noise.” In real world environments, everything from moving water to other projectiles to debris fragments can produce radar hits making it difficult to discern what is what. The new system had to have a way of clearing all the other stuff away to allow the person manning the gun to see very clearly where his round was going. And that’s just what the recent demo of the system showed, an ability to track 5 inch [shells](#) being fired at a rate of one every three seconds.

In addition to saving money on targets, such a system should also lower the cost of ammunition as it appears such a system would reduce training time. The DoD is also hoping to employ the new technology to help in tracking small fast moving targets, such as terrorists in a rubber dingy out to blow up portions of a ship as was done with the USS Cole in 2000.

More information: www.cambridgeconsultants.com/news_pr304.html

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