



# SmartTalk

the newsletter for forward thinking  
security professionals

Issue 2

## Moving with the times

**The last few years have seen significant advancements in technology which has affected us all in some shape or form. This is especially true in the security industry where we are heavily reliant on the latest technology in our bid to tackle security breaches and terrorist threats.**

The take up and use of the internet as a business tool has surpassed all expectations. The ways in which it has been adopted in the work place have yielded real cost and time savings, not to mention the ease and flexibility it offers.

It is unsurprising therefore that the demand for screener training to be available online has risen dramatically over the last couple of years and we are now seeing the first software products offered with an online option. There are clear benefits but also significant pitfalls when purchasing online training so ensure you read our 'Online training leads the way' article for some do's and don'ts when selecting a product.

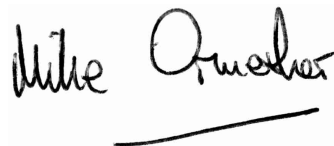
We bring you the latest regulations from the DfT surrounding GSAT courses and advise what you should be looking for in a GSAT training course. We also make suggestions on how security managers can deal with the ever present threat of terrorist activities in our 'screener security training - moving with the times' article on pages 2 and 3.

As rising fuel prices and the credit crunch continue to hit us hard, we look at the

implications this is likely to have on the aviation sector and what this might mean in the future.

We also have a feature on The College of the North Atlantic Qatar and how the Qatari Ministry of the Interior has appointed the College as their preferred provider of security training for the nation's security industry.

As ever, I hope you enjoy this issue of SmartTalk and invite your comments or suggestions for any area that you would like to see us cover in future issues. Please email me directly or the marketing team at: [marketing@smartapproach.com](mailto:marketing@smartapproach.com)



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### In this issue:

Moving with the times	1
Screener training - moving with times	2
Online training leads the way	4
Pass the GSAT course or face suspension	5
The College of the North Atlantic Qatar lead the way in security training	5
Assessing the impact of the credit crunch and high oil prices on aviation security	6



# Screener security training - moving with the times

**The threat of terrorism is no longer a cause of short term inconvenience or imposition on our lives but a very real situation that we must be able to manage and deal with. Managing Director Mike Ormesher looks at how security managers can address these issues.**

Terrorism and other security threats are unlikely to be more evident than within the aviation, maritime and border industries. Transport, be it, air, sea or land is a preferred target as it provides maximum impact in terms of finance, life and publicity.

The most favoured and effective method of breaching security is by concealing threat items and passing them through a checkpoint.

**This is often done by:**

- *Disguising the threat item as an apparently innocent item*
- *Distributing components of the threat item over several bags for later assembly*
- *Concealing the threat item by careful combination with other items*
- *Distracting the screener by adding other easily identifiable object(s)*

## Baggage screening

X-ray screening remains the most powerful tool for screening baggage and with the expanding choice of screening equipment offering even more levels of sophistication, reliance on the skills of the operator is increasing!

It is only with highly trained and motivated baggage screeners that we have any hope of minimising the likelihood of another major catastrophe like those we have seen in recent times.

Unfortunately screeners are not always recognised and given the respect they deserve for such a critical position. Couple that with the facts that:

- *Most screeners will rarely see a real threat*
- *X-ray interpretation is not easy - many people don't have a natural aptitude*
- *Time pressures mean that screeners have only the briefest view of each bag*
- *Screener salaries are low*
- *The job can be dull and repetitive*

And it is not difficult to understand why staff turnover is high and on the job vigilance can be poor.

## Effective screening personnel

For any security process to work effectively it is essential that security personnel have the correct level of competence. New threats, such as liquid explosives, are calling for ever more knowledgeable and skilled screeners and it is now vital to have screeners who are capable of meeting immediate and, as yet unknown, future demands.

Numerous studies have shown that training is vital and that frequent retraining is equally important if screeners are to be kept interested, focused and up-to-date in their knowledge.

It is commonly accepted that the most effective training is through using x-ray simulation software whereby screeners are taught and can practice in a non-pressure environment on a machine interface which is identical to the real x-ray machine.

Using a computer based training (CBT) package enables every aspect of the screeners training sessions and learning progress to be recorded and analysed. This quantifiable evidence ensures that each screener is given appropriate and individual assistance and training, commonly referred to as adaptive training.

Training systems, like SmartSystem from Smart Approach are an essential tool for equipping security personnel with the high quality skills needed for x-ray screening.

SmartSystem is a computer based security training package that has a unique blend of x-ray simulation, image interpretation, security training courses and subsequent skills assessment. Screeners learn how to use x-ray machine controls for the makes of x-ray machine they are likely to encounter on the job and, through practice, how best to interpret the x-ray images using the operator assist functions available on those types of machines.

## Simulation training packages should replicate the real x-ray machine.

CBT solutions should replicate the operation of an x-ray machine precisely – an operator should not be able to tell the difference between the two! Some products achieve this much more effectively than others and it is crucial that a screener is trained with a CBT system that achieves this objective. ICAO recognises the potential danger of mis-training through use of inaccurate or inappropriate training, recommending that such education must be as machine specific and accurate as possible.

Clearly the main part of a screener's role is to interpret the images on the screen and to identify threats. The simulated images offered by suppliers broadly fall into two categories – composite (or overlay) images and real bag images, and each approach has its own strengths and weaknesses.

Overlays and composite images are relatively inexpensive and easy to produce. The image is compiled in a series of layers in which the bags, threat items and other content items are x-rayed separately and the images subsequently overlaid to make a composite image.

This can lead to problems because when an x-ray passes through an object it is changed - the image generated when an x-ray passes through a book, a camera and some clothing is different and more complex from one where the beam passes through these items individually. Hence, composite images fail to reflect the three dimensional nature of a bag and are not truly x-ray correct. Additionally, operator image enhancement functions tend to be poorly replicated, if present at all, and complex bags, those most likely to contain hidden threats, are least well simulated.



In contrast, real bag images, though more costly and time consuming to produce, give a far superior training experience. The images seen by the screener are real bags that have been packed and naturally presented with prohibited and dangerous items packed in with non-threat items just as a terrorist would. The bags are then screened through the same x-ray machine as is to be simulated and the raw x-ray data collected over several scans to show the bag in different orientations. Photographs of the actual packed bag and items of interest are taken, which together with the x-ray data together forms the core information for the simulator. The image on the simulator, including image enhancement functions, multiview machine displays and alternate view rescans, is identical to that seen on the x-ray machine. This is something that cannot be done if using overlay or composite images.

It is imperative that the simulator accurately replicates all functions of a real x-ray machine, especially the images that an operator views. Therefore systems like SmartSystem from Smart Approach use real bag images.

### Continued screener development

Despite the breakthrough with CBT training, the traditionally used model of training by initial classroom instruction followed by on-the-job experience is failing to provide the most competent checkpoint screeners.

Following initial training a point of failure is the ongoing development of screener expertise. The perpetual challenge is that of ensuring screeners remain motivated and vigilant, whilst retaining their edge. Clearly, regular retraining/remedial training will keep skills updated and leading CBT packages, like SmartSystem have refresher training and additional courses included in their systems.

Also used is Threat Image Projection (TIP), which involves superimposing threat item images onto the x-ray of live passenger bags as they are being screened, then giving the screeners immediate feedback on whether or not they identified the threat item correctly.

TIP enabled x-ray machines heighten operator alertness by challenging screeners with more frequent images requiring interpretation and decision making, for it is in the latter where ICAO have identified the problem often exists. TIP feedback information on individuals' performance can then be used as a reference for improving the content of remedial training. Natural aptitude, which can be assessed prior to screener employment, can be built upon, with knowledge and skills weaknesses addressed by structured training being adapted to the specific needs of the individual.

### Smart thinking, smart learning

To move with the times, the ideal screener training process has the overriding objective of continually improving screener competency. Ideally screeners should learn by doing, through being:

- *Trained on a CBT simulation system with a range of x-ray machine models, together with their specific operator assist functions and image viewing angles*
- *Able to recognise a large stock of manufactured and improvised weapons, IIDs and IEDs*
- *Able to view a large number of images, ideally real-packed bag images, with concealed threat items*
- *Trained on a simulator allowing them to scan the bags and compare the images seen with photographs of the real open bag*
- *Able to have their training recorded on a system that maintains detailed records of their progress*
- *Provided with recurrent training and standardised certification*

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# Online training leads the way

**Jan Brown, Senior Account Manager takes a look at how the internet is changing the face of screener training and gives us some do's and don'ts when choosing a web based training product.**

Computer based training courses, commonly referred to as CBT courses have long since become a popular method of training x-ray baggage screeners. Training of this nature is generally more cost effective, more flexible, easier and faster to carry out.

We have recently started to see the move towards online training, meaning that x-ray screeners now have the option of taking an increasing number of CBT courses over the internet, either in the office or in the comfort of their own home.

Clearly there are major issues and challenges for software training providers to overcome surrounding security, validation, usage and monitoring, which means that whilst there is huge demand for online training solutions, there are still only one or two organisations that are able to offer their training product over the internet. This is likely to change in the future as more organisations overcome the challenges and can offer a robust, reliable and stable training product.

SmartSystem V8 from Smart Approach is an x-ray simulation training tool for baggage screeners and is amongst the first products to be launched for web based training. It is based on previous versions of SmartSystem which has long since been recognised as a global leader in computer based training for x-ray screeners. V8 has taken years of development to ensure it is properly web-architected and guarantees security, reliability and robustness, along with all of the usual expectations of design, user functionality and management reporting.



## Do's and Don'ts when choosing a web based training product

**Do** ask questions about the security and reliability of the product. Look for a product that has multi-level password protection, offering different levels of access for trainers and trainees. Your screeners must be given unique log in / password access and relevant permissions should be given to your key trainers so they can assess the effectiveness of the training through analysis of x-ray screener sessions, activity reports, pass rates and a comprehensive audit trail.

**Don't** compromise on quality just to have a web based system. Your screeners deserve the best training available (as do your customers!). Choose a flexible system with high levels of functionality which will allow you to tailor your system to meet the training needs of each and every one of your screeners, from complete novices to your most experienced staff. You really do need to be able to monitor and manage your trainee statistics in order to identify individuals with further training needs.

**Do** ensure that your provider's service levels and quality of support are of a high standard. Check that you can pick up the phone and seek immediate assistance should you need it.

**Don't** pay over the top. It may be new, convenient and easy to run and there is certainly a price for this, but ensure the costs you are quoted are reasonable.

**Do** ensure that your provider is hosting their product in a secure and reputable data centre, with adequate back-up and disaster

recovery plans in place. Some downtime, in other words time when the training will not be available, is a necessity as the provider will need to undertake maintenance or upgrade the system. Just ensure that this is kept to a minimum and that you are advised about any planned downtime **before** it happens!

**Don't** choose a company just for their marketing hype. Ask to speak to other customers and trial the product online. Check their credentials - how long have they been trading?, ask for the names of some of their customers - have you heard of them?, are they DfT registered? - positive answers will give you a level of assurance.

**Do** check that the software caters for the type of x-ray machines that you use. A good system will have an interface for all of the major x-ray machines so that the screener can choose which machine they wish to receive training for at the start of their session.

**Don't** choose a supplier that doesn't offer comprehensive testing and tracking of screener actions. You need software which is capable of producing an individual training record so the HR or training Manager can identify and manage individual training and development needs.

**Do** ensure that the software uses images of real bags for all makes and models of x-ray machines. You should be looking for a provider that uses high fidelity, real bag images so that during training a screener is actually seeing what they would if they were at a real machine in a live situation. This is a big investment for organisations and there are many suppliers that don't offer this technology but it really does train x-ray baggage screeners to the highest standards.

**Don't** choose a system that doesn't offer advanced screener measurement. This is a completely adjustable scoring system which prevents certification by luck or chance and also helps to prevent cheating.

**Do** ensure that the software is capable of issuing uniquely encrypted certificates for screeners who successfully complete and pass the training course.

**Don't** forget about current learning standards and human factors practices. Choose a supplier that takes these factors into account. It has been investigated and educationally proven that when trainees use SmartSystem from Smart Approach for their simulation training there is a marked improvement (up to 70%) in standards, and also in the time taken to complete training to an operational standard.

**Do** make sure the training course is SCORM (Shareable Content Object Reference Model) compliant. This is a 'standard' for web-based e-learning that defines how the individual instruction elements are combined on a technical level.

For further information on online training, email:  
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# Pass the GSAT course or face suspension

**In a bid to tackle the security issues surrounding airports the UK's Department for Transport (DfT) has imposed some strict industry regulations. Products and Services Manager, Stewart Hanson outlines the regulations and advises what you should be looking for in a GSAT course.**

It is now a requirement of EC Regulation 2320 that all airport personnel undertake a General Security Awareness Training (GSAT) course before they are granted an unescorted airside pass.

As of 28 January 2008 applicants for access passes must provide evidence that they have successfully completed a full GSAT course; or provide evidence of 'equivalence' having undergone a better standard of training. Furthermore, by 19 January 2009 anyone who was the holder of a full pass at 28 January 2008 must have provided evidence that they have discharged the GSAT requirements or their pass will be suspended.

The GSAT course is intended to provide a basic grounding in aviation security procedures, to equip staff with an understanding of how to identify and deal with potentially dangerous situations, and enable them to understand the actions to take in the event of an emergency.

In the UK, a GSAT course must follow the official DfT syllabus and training must be presented face-to-face or be a CBT course designed by a DfT accredited trainer. A full list of trainers can be seen by visiting the DfT's website.

When choosing a course look for where thought has been put into to format and delivery style. Courses delivered in modular form with interactive exercises and multiple choice tests at the end of each section help to reinforce the key messages and recollection of knowledge. Ensure that any course awards successful candidates with a uniquely numbered completion and pass certificate. If you want to get a large number of people through the GSAT course quickly, easily and as cheaply as possible then consider a CBT course that can be taken over the internet. Look for a CBT course that is intuitive to use and doesn't require the user to have previous computer experience.

Smart Approach has jointly developed a computer based GSAT course with one of UK's largest airports that takes in the region of four hours to complete. We are one of the first organisations to fulfill the DfT criteria and be recognised on their list of accredited suppliers. Our GSAT course can be undertaken securely online, over a local network/intranet or from a CD Rom.

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# The College of the North Atlantic Qatar leads the way in security training



**The Qatari Ministry of the Interior (MOI) has appointed The College of the North Atlantic Qatar (CNA-Q) as their preferred provider of Aviation security Screener training for their Officers at the Doha International Airport. Martin Miller, Sales Director reports.**

This unprecedented move means that all MOI Aviation Security Screeners will now be sent to the Security Academy at CNA-Q, for their checkpoint screener training, using a Smart Approach product as their primary computer based training system.

An agreement back in 2002 between the State of Qatar and the College of North Atlantic, Canada led to the establishment of The College of the North Atlantic Qatar in Doha. The objective was to offer a range of courses which combined the Canadian curriculum and industry expertise.

At that time, it was recognised that there were no formal college based training courses available for people wishing to work within the security industry. The CNA-Q Security Academy was therefore set up with the aim of offering training to the highest professional industry standards within the security industry.

The Academy identified x-ray interpretation training as a vital element of many of the security training courses. This training would have to be available for a wide range of x-ray equipment since students would be going on to work in a number of different industry sectors ranging from aviation to the gas and oil industry. They also had the limitation that as an academic institute they had limited access to real security checkpoint activities.

The logical solution was for them to adopt a computer based solution, which is the course of action they took in 2005. A combination of past experience and research led The Academy to purchase SmartSystem from Smart Approach. Their selection criteria included:

- *A provider who could provide simulators for the different manufacturers*
- *X-ray simulators that came with images of real bags so that the students would be exposed to the same challenges in identifying threats as they would in their working environments*
- *Simulators that came with a full range of strip options and image enhancements to ensure that students would get the most complete training*
- *A product that would remain up to date and responsive to the changing needs of the industry while also meeting the Security Academy's specific needs.*

The Academy is now building upon their success by offering their services to employers in other Gulf countries.

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# Assessing the impact of the credit crunch and higher oil prices on aviation security



**Entrepreneur and Chairman of Smart Approach, David Hurst-Brown assesses the current economic climate and offers his opinion on how this will impact the aviation sector.**

The credit crunch that has come to dominate media headlines in the past six months is largely an Anglo Saxon problem. Whilst the crisis was triggered last Autumn by a growing awareness that default rates on US sub prime mortgages were proving to be higher than lenders had anticipated, this was only the catalyst to unravelling a much more deep seated economic problem shared mainly by the UK (including Ireland) and the USA. The cycle of economic growth in both these countries had been sustained for far too long by low interest rates and easy credit which had seduced consumers to burden themselves with an increasing amount of personal debt. The confidence to take on this mountain of affordable debt was typically encouraged by a 'feel good' factor about the rising equity value as opposed to mortgaged value of the individual's principal lifetime investment - his home! The two big losers of the crisis are therefore indebted consumers and, if they lose their jobs, which many will, bankers.

The international aviation security industry in broad terms has two groups of end customers - airports and airlines.

I believe the effect of the credit crunch on the profitability of airports will be limited. Their daily income derives mostly from landing fees and property rental from retail shops. Landing fees are earned from airlines all over the globe and, it is hard to see them coming under serious pressure unless the global economy collapsed and with it passenger numbers. Whilst the retail operators at certain airports will themselves suffer from weak consumer expenditure and competitive prices we would judge the rental income received by the airport companies will prove pretty resilient. On top of all this, many airports are Government owned organisations and it is difficult to envisage them cutting expenditure on security because of the economy was under pressure.

The profitability position of the airline industry is a radically different story. Irrespective of the credit crunch, the dramatic rise in aviation fuel costs is a financial problem for all airlines. Irrespective of the credit crunch, the boom in low cost air travel has led to numerous start up airlines all around the world. Even in benign economic times these start-ups quite often fail or are forced into mergers. In the current climate, where the availability of finance, the life blood of new ventures, is constrained, there will be more failures and mergers- witness the recent merger of Delta and Northwest. Finally, we expect the premium travel market to experience reducing load factors and pricing pressure as bankers move further back in the plane when they are travelling.

Evidence of the effect of all these pressures is starkly provided by recent broker estimates of profits at British Airways. For example, UBS the broker to BA, is forecasting profits to fall from £875m last year to £242m in the current year a decline of £633m! Against this background airlines will be looking to reduce costs aggressively.

In most cases it is difficult to see how they can make savings in security without compromising service standards, not least because of the increasingly regulated security environment in which they operate. One thought however might be to examine the cost effectiveness of CBT training as opposed to conventional chalk and talk. The savings realised from reduced travel time, accommodation costs can be substantial!

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