Neutron scanner - Brisbane trial

Customs and the CSIRO are trialling a neutron scanner prototype to check air cargo containers quickly and accurately for explosives, drugs and other risks.

The scanner will be at Brisbane Airport, next to the Qantas cargo terminal operator facility. Construction is under way and the trial is expected to start by mid-2005. It will go through a six-month testing and ramp-up period until early 2006.

Customs will test the scanner on a range of air cargo items and modify its own business processes if necessary as the capabilities of the scanner are assessed.

The field trial will then use the scanner at full capacity for up to 12 months to allow a rigorous assessment and to identify opportunities to use the technology to improve the efficiency and effectiveness of cargo processing.

The trial will initially focus on import cargo. A business process for scanning export cargo will be developed in consultation with industry and the Department of Transport and Regional Services.

The scanner is designed for mass screening but, during peak times, Customs will select flights. If the scan indicates that there might be items of interest to Customs, the goods will be unpacked for a more detailed examination.

For the trial, there are two unpack options:

- unpack at the cargo facility, under the supervision of Customs - this will allow goods not of interest to Customs to continue on their way at the earliest opportunity
- unpack at the neutron scanner facility - this will mean Customs will hold all goods until the freight can be repacked and forwarded to the cargo facility.

If Customs is satisfied that unpacks at the cargo facilities can be done in a secure process that suits both Customs and industry, this option will be preferred. Customs might choose, however, to unpack at the scanner facility for operational reasons. In this event, while Customs will undertake the actual examination of the goods, the unpack and repack will be done by contracted cargo-handling staff.

Customs will consider other unpack options suggested by industry against the operational needs of all stakeholders and security considerations.
Each scan will take about two minutes. But international experience and logistics modelling at Brisbane Airport indicate that the total transport and scanning time will add approximately two hours to the normal process.

Customs will work towards minimising the timeframe, but industry should be prepared to accommodate the delay and might be required to modify business processes to accommodate the new scanning process.

Customs will not provide any guarantees of processing times for late-reported cargo. Customs must match manifest information to the image as part of the scanning process. In cases where the air waybill report has not been submitted to Customs by the time the cargo is scanned, the cargo might be delayed.

Customs expects some efficiencies to be gained for both Customs and industry if the scanner performs at the expected level. For industry, this might include a reduction in the number of intrusive inspections of air cargo and earlier assessment and action on high-risk cargo. The air cargo industry will also benefit from the expected enhancement of aviation security.

Customs CEO, Lionel Woodward said: "This technology is one of the measures Customs and the Australian Government are exploring to strengthen airport security and air cargo screening."

Dr Geoff Garrett, the CEO of CSIRO, said: "This is an example of the value of CSIRO working in close partnership with its customers and capitalising on its long-term investment in scientists and subsequently developing leading-edge technologies for delivery to market.

"Through our science and innovative thinking we have been able to address a real need identified by Customs and the Government as being crucial to Australia's security."

Customs welcomes comments on this subject by e-mailing neutron.scanner@customs.gov.au