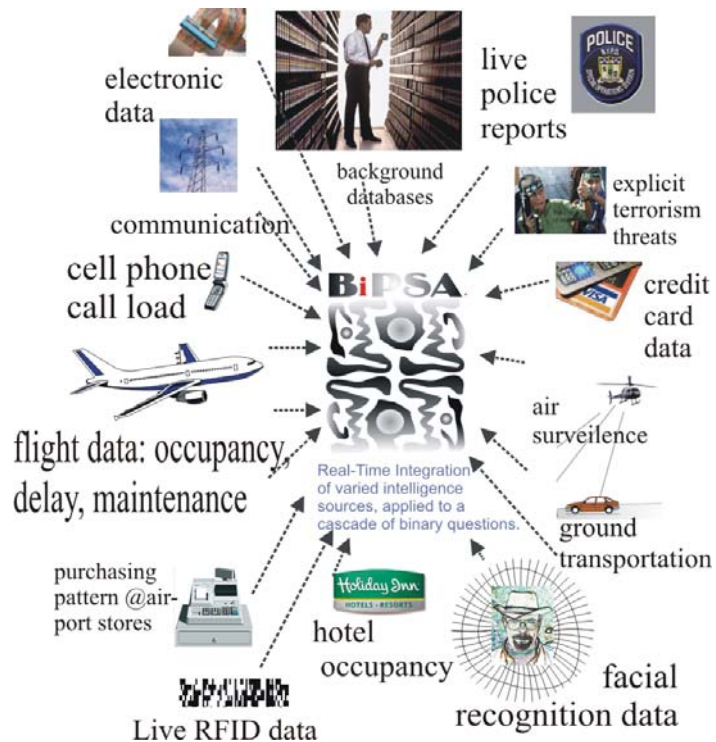




A Novel Multi-Variate, Real-Time Airport Alarm: Spotting a Terrorist Attack in the Making

It's easy to break a tiny twig, but hard to bend a bundle of the same. Similarly it's hard to spot the preparation for a terrorist attack by inspecting one piece of data. When all available data is integrated, the pending attack is much more visible. This is the principle BiPSA is exploiting in its unique and novel algorithms designed for real time accounting of tens of thousands of dynamic factors that together reflect what is going on in the airport at any given moment. The data is largely available, but today it's not fed into a powerful and effective real time inference engine that is capable of integrating the individual pale and faint indications of something suspicious, and develop a credible suspicion index,



giving the security team a critical head start, and an opportunity to take countermeasures. BiPSA learns. It learns from the entire case load of attempts (successful or otherwise) on airport everywhere. It learns from training exercises where terrorist role players plan an attack, and it learns from human wisdom that defines inference rules for the system. The prevailing multi-variate systems suffer from a high degree of arbitrariness, and become computationally prohibitive when the number of input parameters increases. BiPSA was designed to be almost completely clean from arbitrary input, and its neural network structure was built to handle a very large number of input data, computing the integration in real time. When installed BiPSA would continuously compute and display an alarm index that will help the airport security team in its daily decisions for special precautions, last minute changes, extra readiness on the part of first responders etc.

BiPSA software should be installed in the airport control station. In the next phase, the various airport BiPSA systems will be integrated to share data so as to spot multi site terrorist attacks