

1. **ACERA Project No.:** 06 / 05
2. **Project Title:** Statistical Process Control and related methods for surveillance monitoring and anomaly detection
3. **Theme:** Surveillance and monitoring
4. **Rationale:** Tools are needed to provide rapid analysis and early-warning of anomalies, methods that can be implemented reliably by a range of people with different levels of technical expertise. There is an opportunity to develop new systems that gather and process data efficiently and reliably, provide a rapid assessment of trends and unusual patterns, display indices of risk from multiple inputs, and provide statistically defensible 'trigger-values' to alert decision makers of the need to take action to remediate a new threat.
5. **Outputs:** This project will evaluate 'traditional' monitoring methods to the surveillance and detection of bio-security risks &/or threats, evaluate 'new' and emerging areas of surveillance (particularly, process control methods) that show promise for their ability to identify and predict trends and anomalous data, use simulation methods to investigate the performance (false 'triggering') of current and proposed surveillance practices in selected key areas, based on scenarios of relevance to DAFF, and synthesise the outcomes and to produce user-friendly software tools for displaying relationships, trends, and anomalies in the kinds of data typically encountered in biosecurity applications.
6. **Time frame:** Commencing: *May 2006*, Finishing: *June 2008*

**7. Project Leader(s):**

Title	Name	Organisation
Prof	David Fox	UoM

**8. Resources**

	06/07	07/08	08/09
<i>Salaries and stipends</i>	18,000	137,500	137,500
<i>Travel</i>	2,000	10,500	12,500
<i>Operating, capital &amp; project management</i>	16,000	17,700	17,900
<b>Project Total</b>	<b>\$36,000</b>	<b>\$165,700</b>	<b>\$167,900</b>

9. **End Users:** AQIS, PIAPH, AusBioSec, AHA, PHA