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Publicly held companies
mentioned in this report:

BAA Plc
British Airways Plc
International Business
Machines Corporation
SAGEM SA
SAGEM Morpho, Inc.
Virgin Group Ltd.

(Details regarding stock
symbols and exchanges can be
found on the last page of this
report.)

Privately held companies
mentioned in this report:

PA Consulting Group

Additional information is
available at:

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Homeland Defense Industry

A BIOMETRICS SECTOR UPDATE REPORT January 25, 2005

“Common international standards of biometrics must be developed, and the sooner the better. Biometrics is a remarkable, tremendous technological tool, the use of which can not only accurately identify and cross-check travelers and potential terrorists before they enter our countries, but biometrics also provide increased travel document security and guard against identity theft.”

Tom Ridge, Secretary, US Department of Homeland Security
*Transcript of the Secretary of Homeland Security Tom Ridge
at the Center for Strategic and International Studies*
Washington, DC
January 12, 2005

Overview

This report provides updated details and analysis regarding the UK's Identity Card legislation and its link to the country's e-Borders program, including key program components Project Semaphore and Project IRIS.

Sector Thesis

The market for advanced technology biometric solutions—both hardware and software—is expected to expand sharply during the 2005 through 2008 timeframe. High volume applications such as public sector passport and driver's license programs, in our view, will provide solution providers with huge sales potential accompanied by thin profit margins. Lower volume specialty applications deployed at the single-site, single-agency, and single-enterprise levels will have limited sales potential, but are likely to be characterized by above-average profitability. We expect that during the forecast period industry consolidation will accelerate, and that the winners in this consolidation process will be those solution providers that are able to develop and maintain a decisive competitive advantage based on constant innovation balanced with effective cost controls. Companies not able to meet the challenge of striking such a balance, in our opinion, are likely to succumb.

The UK Launches “e-Borders” Program

The UK's new Home Secretary, Charles Clarke, is moving forward with the Identity Cards Bill (Bill 008) presented to Parliament (www.parliament.uk) on November 15, 2004 by his predecessor, David Blunkett. (Blunkett resigned his Home Secretary post on December 15, 2004 after an official inquiry linked him to the fast-tracking of a visa application submitted by an ex-lover's nanny.) At the time of his resignation, Blunkett was under intense pressure from opposition Members of Parliament to

abandon the Bill based on concerns regarding privacy.

...section 1, paragraph 1 of the *Identity Cards Bill* specifies that it shall be the duty of the UK's Secretary of State to establish and maintain a register of individuals to be known as "the National Identity Register" ...section 5, paragraph 5, parts (a) through (d) of the Bill specify the use of fingerprints on UK identity cards ...the Bill would also allow other biometric information to be taken and recorded ...iris- and face-based biometrics have been actively discussed by government officials as candidates for implementing a multi-biometric approach to UK identity cards ...the Bill would also call for the use of photographs on UK National Identity Register cards

...our sources indicate that UK citizens will be called upon to pay a total fee of approximately £80 (US\$150) when purchasing a combined passport/ID card ...this compares with the current passport fee of £42 (US\$79) ...an estimated fee of only £35 (US\$65) would be charged for ID cards purchased separately ...ID cards are expected to be free to children under 16 years of age and retired people 75 years old or more ...UK citizens on low incomes are expected to be charged a reduced rate of about £10 (\$19) per ID card

...it is currently expected that the UK's first ID cards would be issued on a volunteer basis in 2008 ...Parliament could be called upon to decide in 2011 or 2012 whether to make such cards compulsory ...the Identity Cards Bill will also create new criminal offences on the possession of false identity documents ...the Bill envisions a fine of up to £1,000 (US\$1,872) for registrants failing to report changes in the details contained on the cards ...a fine of up to £2,500 (US\$4,678) would be levied for failing to sign up if the cards become compulsory ...the Identity Cards program would be overseen by a new independent watchdog ...our research indicates that 15 European Union Member States currently issue some form of identity card, though not all of these programs are compulsory

...regarding market size and growth, LRP notes that the total population of the UK is 60.3 million (estimated as of July 2004) ...the UK's annual population growth rate is an estimated 0.29% ...the United Kingdom Passport Service (www.ukpa.gov.uk) estimates that 60.0 million international voyages were made by Britons in calendar 2003, indicating an average of about one international voyage per citizen ...the *United Kingdom Passport Service (UKPS) Corporate and Business Plans 2004-2009* indicates that demand for passports grew from 4.6 million in 1998/99 (ended March) to an estimated 5.7 million in 2003/04, implying compound annual growth of 4.38% ...demand in the UK for passports is projected to rise to 6.1 million in 2004/05, up 7.02% ...officials expect demand to peak at approximately 6.8 million in 2006/07, implying compound annual growth of 5.58% during the 2004/05 through 2006/07 timeframe

...a private company, London-based ***PA Consulting Group*** (www.paconsulting.com) has a two-year contract to work on the design and implementation of the UK's envisioned identity cards ...PA Consulting Group is a management, systems and technology consulting firm

A summary of the UK's Identity Cards Bill can be found in Appendix I of this Report. The full text of this Bill can be accessed at www.publications.parliament.uk/pa/cm200405/cmbills/008/2005008.pdf. The UKPS Corporate and Business Plans 2004-2009 can be accessed at www.passport.gov.uk/downloads/CBP2004.pdf.

The UK's biometrics-based passport and identity card programs will be developed in parallel with the country's e-Borders (electronic borders) program. Announced by UK Prime Minister Tony Blair on September 28, 2004, Project Semaphore is the first stage "pilot program" for e-Borders. (The word "semaphore" refers to a visual system for communicating via signal flags, using an alphabetic code based on the position of the signaler's

arms.) Project Semaphore is viewed by many industry observers as being a “mini” version of the US system for sharing traveler identity information across international borders.

...a £15.0 million (US\$19.6 million) program, Project Semaphore is focused on recording the passage of travelers in and out of the UK ...currently being implemented, the Project is initially targeting approximately 6.0 million airline passengers identified by border agencies and police as being “risky” and traveling certain international routes in and out of the UK ...routes also have been chosen on the basis of risk assessments by border agencies including the UK Immigration Service (www.ind.homeoffice.gov.uk) and the UK’s HM Customs and Excise (www.hmce.gov.uk) ...while the UK government has not announced which air routes are included in the program, industry sources speculate that the routes involved are London to-and-from Bangkok, Dubai, Islamabad, Karachi, Lahore, Miami, Ottawa, Riyadh, and Washington DC ...UK government officials expect that e-Borders will be fully implemented covering all travelers in and out of the UK by 2008

...the UK’s e-Borders program is being implemented by the Home Office ...the program will be closely coordinated, however, with the UK Foreign Office (www.fco.gov.uk) and its iVisa program, the Immigration and Nationality Directorate (www.ind.homeoffice.gov.uk), the UK’s MI5 (www.mi5.gov.uk) and MI6 (www.fco.gov.uk) intelligence agencies, HM Customs and Excise, the UKPS and its biometric passport program, the Department of Work and Pensions (www.dwp.gov.uk), and the UK ID cards program discussed above

...on November 3, 2004, the UK Home Office announced that it had signed a contract with Armonk, New York-based **International Business Machines Corporation** (IBM) (www.ibm.com) to implement a pilot program for Project Semaphore ...this three-year contract calls for IBM to build a working “proof-of-concept” border control system and to assist the UK Home Office with e-Border-related procurement activities

...the Project is expected to eventually link UK government agencies with travel operators and overseas transport terminals ...ultimately, every traveler entering the UK will be logged, cross-checked against databases of known terrorists, and authorized before journey’s start ...travelers rejected by the system will be denied travel privileges

The UK’s Project IRIS (“IRIS” is an acronym standing for Iris Recognition Immigration System), another component of the e-Borders program, is an automated border entry system based on iris recognition technology. Originally announced in June 2004, Project IRIS is expected by the UK government to be operational at key UK airports by the summer of 2005. Central to the success of the Project, will be the performance of the Project’s iris-based biometrics identity confirmation system.

...the Project IRIS database will store the unique iris patterns of individuals from certain groups of foreign nationals having a record of complying with UK immigration laws ...such groups will include foreign nationals who live permanently in the UK ...regular travelers and work permit holders will also be eligible to enroll in the program ...UK government officials indicate that all participants will be thoroughly vetted on an individual-by-individual basis

...those individuals who have been successfully vetted and enrolled will have both of their eyes filmed via a standard video camera in order to capture the unique iris pattern of both eyes ...the enrollment process is expected to take approximately five minutes ...enrollees entering the UK will be able to use a dedicated immigration area equipped with an iris recognition camera ...each

enrollee's live iris scan will be compared with the corresponding iris pattern record stored in the Project IRIS database for identity verification

...the Home Office has signed a five-year supply and maintenance contract with Paris-based **SAGEM SA** (www.sagem.com) for the Project's iris recognition system ...industry sources estimate that SAGEM commands a 49.0% share of the worldwide AFIS (Automated Fingerprint Identification Systems) market ...importantly, SAGEM is one of the world's few AFIS providers that is positioned to act as both AFIS developers and systems integrator ...this unique business model, in our view, positions SAGEM well for contract wins involving large-scale biometric applications

...in addition to AFIS biometric solutions, SAGEM provides fingerprint-based non-AFIS solutions for physical access control, network security, and secure check-cashing ...the company also provides multi-biometric identity verification solutions incorporating iris and face recognition technologies via strategic partnerships with other advanced technology identity solution providers ...the company's identity verification Machine Readable Passport (MRP) solutions can incorporate fingerprint, iris, and face recognition technologies separately or in any combination

...secure travel document solutions provided by SAGEM are in compliance with the post-9/11 international biometrics standards set forth by the ICAO (International Civil Aviation Organization) (www.icao.int) ...biometrics solutions developed by SAGEM have been selected by notable customers such as the US FBI (www.fbi.gov), Interpol (International Criminal Police Organization) (www.interpol.com), and the United Nations (www.un.org) ...SAGEM's North American subsidiary is **SAGEM Morpho, Inc.** (www.morpho.com)

...the UK Home Office is deploying Project IRIS during 2005 ...the Project will be installed at the five UK airports with the highest international arrival traffic ...among the first sites being deployed are terminals 2 and 4 at the world's busiest international airport, London Heathrow Airport (www.baa.com/main/airports/heathrow), owned and operated by **BAA Plc** (British Airports Authority) (www.baa.com) ...also included in the initial deployment are Birmingham International Airport (www.bhx.co.uk), London Gatwick Airport (www.baa.co.uk/main/airports/gatwick), all additional terminals at London Heathrow, terminals 1 and 2 at Manchester International Airport (www.manairport.co.uk), and London Stansted Airport (www.baa.com/main/airports/stansted) ...it is expected that within five years Project IRIS will have more than 1.0 million enrollees

...the current Project IRIS deployment follows a successful trial at Heathrow Airport in 2002 ...that trial was jointly conducted by BAA, the UK Immigration Service, Middlesex, England- based **British Airways Plc** (www.britishairways.com), and London-based **Virgin Group's** (www.virgin.com) Virgin Atlantic Airways (www.virgin-atlantic.com) ...industry data indicates that in 2004 British Airways served an estimated 38.0 million travelers while Virgin Atlantic served an estimated 4.0 million ...that trial registered the iris patterns of 200 enrolled passengers

UK government officials contend that the UK's border controls are currently among the most secure in the world. However, officials from Interpol, based in Lyon, France, and headed by an American Secretary General named Ronald K. Noble, have expressed serious concerns regarding those very borders. Regardless of the current status of the UK's border security, the country's central position in international air travel makes it the key link in the battle against air-based terrorism.

...government officials in the UK point to the fact that they are strategically deploying new technologies to further reinforce the country's border integrity ...further, the UK already employs

detection equipment along its northern European coastline as a deterrent to would-be illegal immigrants ...the UK is also emerging as a leader in border security via its coordinated biometrics-based visa, passport and, as currently planned, identity card program

...Interpol's Ron Noble, though, told a UK House of Lords committee that he was not asked for his passport serial number when entering the UK, despite the fact that Interpol's investigations have shown that a fraudulent passport has been used in every single modern-day terrorist incident ...Interpol maintains a list of an estimated 5.0 million stolen passports ...testimony delivered to the Home Affairs sub-committee of the European Union (europa.eu.int) indicates that the EU has a database of 10.0 million lost or stolen passport serial numbers ...in the UK there is currently no automatic protocol for recording passport serial numbers

...international identity verification system inter-operability, in the view of LRP, will be critical ...Noble states that Interpol's efforts to gather information across international borders are hampered by the EU and national police services' fears that such information would fall into the wrong hands ...the UK has a database of about 200,000 stolen passport numbers which it actively shares with Interpol, and Interpol's Noble has said that his organization is giving the UK access to all of its stolen passport numbers as a temporary solution ...also, the EU is considering plans to force member states to share data on lost and stolen passports ...the EU already maintains a database of stolen passport numbers covering the 15 countries party to the Schengen Treaty ...this treaty removes some of the border controls between member states ...but the Schengen Treaty does not include the UK

LAGUNA RESEARCH PARTNERS
MCMXCVIII

APPENDIX I

Summary: The UK Identity Cards Bill

A BILL

To make provision for a national scheme of registration of individuals and for the issue of cards capable of being used for identifying registered individuals; to make it an offence for a person to be in possession or control of an identity document to which he is not entitled, or of apparatus, articles or materials for making false identity documents; to amend the Consular Fees Act 1980; to make provision facilitating the verification of information provided with an application for a passport; and for connected purposes.

Presented by Mr. Secretary Blunkett

Supported by The Prime Minister, Mr. Secretary Prescott, Mr. Chancellor of the Exchequer, Mr. Secretary Straw, Secretary Margaret Beckett, and Mr. Desmond Browne

Ordered, by the House of Commons, to be Printed, 29th November 2004

(The full text of this Bill can be accessed at:

<http://www.publications.parliament.uk/pa/cm200405/cmbills/008/2005008.pdf>)

Companies mentioned in this report ▀

BAA Plc (BAA-LSE)
British Airways Plc (BAY-LSE) (BAB-NYSE)
International Business Machines Corporation (IBM-NYSE)
PA Consulting Group (privately held)
SAGEM SA (FR0000073272-PSE)
SAGEM Morpho, Inc. (subsidiary of SAGEM SA)
Virgin Group Ltd. (privately held)

*Homeland Defense Research and Analysis from Laguna Research Partners focuses on companies that, in our view, are positioned to make important contributions to the War on Terror, both in the US and abroad. Our Homeland Defense Industry Biometrics Sector Update Reports provide our analysis of key industry and company events related to **advanced biometric security solutions**.*

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