BIOMETRIC PASSPORT SYSTEM
REPUBLIC OF GHANA

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ABSTRACT

Tracking the movement of people in and out of a country can be a daunting task, especially when relying upon old systems and manual inspection of identification materials. Biometric documents provide a much more efficient and effective method to control population travel, especially when those systems are linked across governments and agencies. To comply with the International Civil Aviation Organization (ICAO), and remain a member country in the organization, the Ghana government worked with Innovatrics and their partner Buck Press Limited to design, build, and implement a biometric document system to control immigration and emigration across Ghana’s borders.

THE SITUATION

The Ghana government was operating an antiquated system for controlling population traffic across its borders. But, as a member of the International Civil Aviation Organization (ICAO), Ghana needed to implement a biometric document system in order to avoid having its population denied entry to other ICAO-member countries.
THE CRITICAL ISSUES

The process for maintaining border security is complicated. It involves not only systems to check identification documents, but it also involves manual processes such as question-and-answer and document analysis. But the issues surrounding immigration controls aren't just about the processes for checking, it's also about the personal experience. In many cases, existing processes, when inadequately manned, can create long delays and frustration.

The critical issues can be distilled into three primary areas:

**SPEED** — The solution needs to be accurate and fast for identifying members of ICAO member countries;

**INTEROPERABILITY** — The solution needs to be compatible with other government systems from other ICAO-member countries;

**SATISFACTION** — The solution needs to ensure high user satisfaction by efficiently processing biometric documentation.
THE SOLUTION

The solution provided a number of benefits to the Ghana government:

**SPEED** - the system employed industry-leading and proven technologies to enable rapid and accurate recognition of population biometric documents;

**COMPLIANCE** - the system ensured that Ghana complied with the ICAO-requirements ensuring that its citizens would not be denied access to other member countries;

**CUSTOMER SATISFACTION** - the system significantly reduces the wait time associated with population identification utilizing a modular architecture employing the biometric methods designed to meet ICAO requirements.
IMPLEMENTING THE SOLUTION

The implementation of the system for the Ghana government required Innovatrics to understand, conform, and ultimately build a solution that was compliant with the ICAO-member country requirements.

THE COMPONENTS

SOFTWARE - Innovatrics employed their industry-leading ExpressID AFIS, ANSI & ISO PC SDK.

HARDWARE - Innovatrics employed Futronic biometric scanners.

BIORAP - the software and hardware solution needed to be compatible with the Biometric Centre deployed by the ICAO to handle member-country biometric analysis.
As a turn-key solution, Innovatrics provided the hardware, software, and the expertise. Beginning with design, Innovatrics and their partner Buck Press Limited worked with the Ghana government to understand the ICAO requirements and how their solution would need to interoperate with other ICAO-member systems via the Biometric Centre.

Once the design was finalized, Innovatrics and their partner Buck Press Limited put together the hardware and software, implementing a stand-alone solution that could be deployed at any border station.

Finally, Innovatrics and their partner Buck Press Limited ensured that the Ghana government was well-versed and trained in how to utilize the system, enabling them to deploy personnel with the requisite knowledge to operate and troubleshoot on-site.
THE RESULTS

The results of Ghana’s new system were two fold. First, it allowed them to remain members of the ICAO, providing biometric immigration control systems to other ICAO-member country citizens. Second, it enabled a much more efficient and secure immigration management system, eliminating the middlemen in the application / acquisition of passports and the avoidance of situations where individuals could manipulate the system and acquire multiple passports.

ABOUT INNOVATRICS

Innovatrics is focused on providing fast, accurate, interoperable and sensor independent fingerprint recognition software for incorporation into final biometric applications. Innovatrics components offer exceptional performance perfectly suitable for both, high-end and low-cost biometric applications. More information about Innovatrics products and technologies can be found at www.innovatrics.com.

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