The West African Examinations Council Mobile Student ID System

"The implementation of this real-time identifi-cation and monitoring system helps bring to life our vision of being a world-class examinations body."

Charles Eguridu

WAEC Head of National Office Lagos

Nigeria

To combat the high instance of identity fraud and improve the overall student validation process at the time of the exam, the West African Examinations Council (WAEC) in Nigeria has adopted a mobile ID system. Now more than 2.2 million students register online and receive machine-readable HID Global smart cards every year.

The West African Examinations Council (WAEC) is West Africa's foremost examining body. It was established by law in 1952 and today, is comprised of five member countries -- Nigeria, Gambia, Sierra Leone, Ghana, and Liberia. Services provided by the WAEC include:

- Conducting public examinations for primary and junior/senior secondary school levels
- Conducting aptitude tests for institutions and corporate bodies
- Issuing results and certificates of completion/passing on the examinations administered

Every year WAEC registers more than 2.2 million students for annual exams conducted in more than 13,000 participating exam centers across Nigeria. With an admirable mission and high standards, WAEC soon realized maintaining the integrity of the organization was going to require more than basic security procedures to identify, authenticate and monitor students during the examinations process while at the same time, providing a professional and comfortable testing environment.

Challenges

The historical method for exam registration and authorizing is manual, time consuming, and susceptible to fraud. Students register online and are provided a paper receipt that is later manually validated at the time of testing without a secure process to confirm the student is who he or she says. For this reason tracking and recording cases of identity fraud is difficult and suspect. While WAEC knew it needed to do something to remedy the situation, with so many exam centers spread throughout the country, building a more secure infrastructure from the ground up was not economically feasible.

To facilitate improvements in the annual examinations, WAEC turned to Botosoft, based in Lagos, Nigeria who commissioned HID Global to assist with the development and deployment of a secure card issuance and mobile ID system which allowed WAEC to meet and exceed its security needs within budget.

"The implementation of this real-time identification and monitoring system helps bring to life our vision of being a world-class examinations body," said Mr. Charles Eguridu, WAEC Head of National Office Lagos. "We turned to Botosoft and HID Global to develop an electronic Student ID card program that could address the high volume issuance requirements of WAEC in a very aggressive timeframe as well as our overall need to improve the efficiency and accuracy of the annual exams."

On-line registration for an identity card, read using a mobile device at each examination site, was decided to be the most practical solution. These cards would be valid only for the examinations being held in a particular semester and expire immediately on completion of the final paper. Without a valid card, students would not be allowed to take their exams.
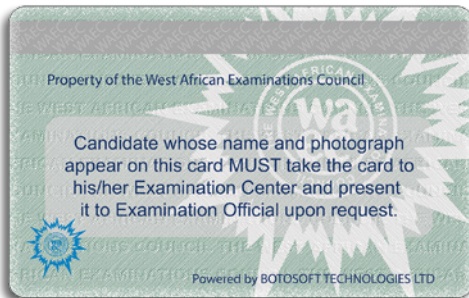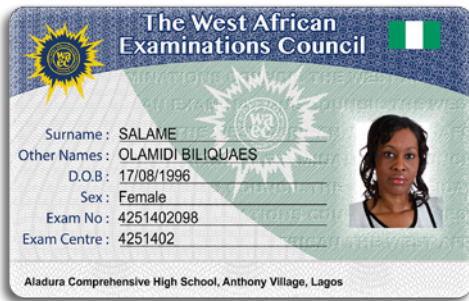
Challenges (continued)

With security, flexibility and quality at the forefront, WAEC required a secure issuance system that could print upwards of 1.8 million cards in the spring term and another 400,000 cards in the autumn term. Further, the cards needed to be checked and authenticated at the examinations sites by local officials.

HID Global leveraged Government ID expertise and offerings to deliver a customized solution to accept the raw data from WAEC's online enrollment process; validate the information and prepare it for use in personalizing the cards in the Botosoft facility. Additionally, HID Global assisted with the design and development of the mobile reader application software used in the mobile readers. Once issued, Botosoft's *Candidates Identity Verification, Attendance, Malpractice and Post-Examinations Management System* (CIVAMPEMS) ensures effective administration of the "Exam Day" process.

Solutions

Students now register online. The information is used to personalize and issue a machine-readable smart card to each student. This same information is stored in a central biometric database that can be accessed in real-time by the new mobile readers at the time of the exam.

Today, more than 15,000 mobile readers have been distributed to over 3,500 exam centers throughout Nigeria allowing supervisors to identify and authenticate students at the time of the exam by accessing student information from the HID smart card and validating it against the central database in real-time. Similarly, information about the testing process including, date, time and the name of the testing center is added to the student's online records.

WAEC's vision to be a world-class examinations body and gaining international recognition now inspires and challenges more than 2.2 million African students every year. To facilitate improvements in the annual examinations, WAEC teamed with BotoSoft and HID Global to develop an electronic Student ID card program that would address high volume issuance requirements and the need to improve the efficiency and accuracy of the annual exams.

"Our goal is to make the lives of the Nigerian people better," said Babatope M. Agbeyo, Chairman, Botosoft. "By partnering with HID Global we have been able to help WAEC achieve its goal to maintain the integrity of the examinations process. In 2014 we helped register and validate more than 2.2 million students at examination centers across Nigeria using 15,000 custom mobile readers."

The WAEC student ID card incorporates multiple technologies to facilitate the greatest security and protection against ID fraud possible. Beyond visual identification – the candidate whose name and photograph appear on the card must take the card to the appropriate exam center and present it to the Examinations Official upon request – multiple embedded technologies not visible to the naked eye have been incorporated. Specific features unique to the WAEC student ID card include:

- An integrated contactless chip
- A UV blue WAEC logo
- Guilloche graphics
- Micro-text
- Warped patterns with faded edges
- Text relief, two-color over print
- Faded photo box edges overlapping with personalized photos

To facilitate the rapid personalization and issuance of secure identification cards, HID Global provided a turnkey software and hardware solution including FARGO® DTC4500 and 4500 ID card printers / encoders deployed in under four months with a capacity of more than 65,000 cards per day. HID Global provided hands-on training and support to the Botosoft production team.

Solutions (continued)

Botosoft's *Candidates Identity Verification, Attendance, MalPractice and Post Examinations Management System* (CIVAMPEMS) is used to address and record exam day activities – capturing and recording events/occurrences as they happen, with the ability to report them in a timely manner. Botosoft's CIVAMPEMS verifies the identity of students when cards are scanned with the mobile reader as well as recording attendance, and any related examinations malpractice by the student. As a result, WAEC receives access to very reliable data including post-examinations reports. Information is recorded and stored on the mobile readers and interminably sent to a secure database providing WAEC with secure, reliable access to examinations reports whenever needed.

Results

Innovations in mobile ID technologies are beginning to emerge, allowing secure identification and authentication as well as instant access to critical information. Students are now issued a secure, biometric RFID credential that is registered in a central WAEC biometric database. Supervisors at the examinations sites can authenticate students in real-time via a handheld reader that can access the central database. The result:

- Reduced exam fraud

- Less paperwork

- Increased value of the diploma

In addition, with the advancements made by HID Global the next generation mobile reader could be a smart phone. Using smart phones as readers will significantly reduce infrastructure costs.

"Education in emerging countries is key to the development of human capital and therefore key to Nigeria's future. We are excited to be at the forefront of the Mobile ID market, and to be instrumental in bolstering faith in the qualifications that legitimate candidates work so hard to achieve" said Rob Haslam, vice president, Government ID Solutions with HID Global. "Innovations in mobile ID technologies are allowing us to meet the unique ID needs of our customers, especially those in developing countries where mobile technologies have leapfrogged more traditional technology infrastructures. Working together with Botosoft we were able to build and deliver a secure and affordable solution to meet WAEC's specific needs."

About HID Global Government ID Solutions

As a worldwide leader in secure identity solutions, HID Global is a proven and respected brand in the access control and secure ID solutions industry. HID Global's Government ID Solutions provides governments worldwide with an end-to-end portfolio of highly secure, custom government-to-citizen ID solutions. The company has shipped more than 150 million eIDs in over 50 countries for major projects that include national ID, e-passport, foreign resident ID, worker ID, driver's license and vehicle registration programs worldwide. Additional information on the complete portfolio of HID Global's government ID solutions can be found at:
www.hidglobal.com/government/citizen-id