Leveraging Mobile Technology and “Bubble Tag” Wristbands to end the Problem of Ghost Children

ID4Africa Movement
Abuja, Nigeria, April 26, 2018

Speaker: Mr. Clément KAISER, co-founder, iCivil Africa
In sub-Saharan Africa, birth registration rates are below 50%. In the poorest households, it is less than 30%.

- 230 Millions Ghost Children

2/3 of the deaths are never recorded and are therefore not counted in the vital statistics system.

However, it is necessary to specify that, these data concerning unregistered children are necessarily approximate. They are likely to be much larger.
“A well-functioning Civil Registration and Vital Statistics (CRVS) system registers all births and deaths, issues birth and death certificates, and compiles and disseminates vital statistics, including cause of death information. It may also record marriages and divorces.

Despite the well-documented benefits of CRVS, many countries do not have adequate systems in place. The births of tens of millions of children are known to be unregistered every year, and it is estimated that two-thirds of deaths are never registered and are thus not counted in the vital statistics system.”

World Health Organization
Citizens:
New born, young boy and older

Parents:
Citizen’s parents

Midwife:
Or any authorized person

National Registry Officer:
Government Officer

Judge

Issuer of administrative or official documents:
Local Government Officer

CRVS: Complexity due to multiple Stakeholders and multiple Sites...
CRVS: Complexity due to Temporality Factor
iCivil™ SOLUTION
Integrated System for People e-ID
Bubble Tag Wristband

- Cannot be cloned
- Unique: Chaotic 3D Self Generated Code resulting from a Natural phenomenon
- Unpredictable digital signature
- Total Traceability of actors
- Digital and visual Authentication
- Do not break down
- Life cycle exceeding 250 years
Maternity

**iCivil™ SOLUTION**
Operation: Birth Declaration – Day 0

1. A Bubble Tag Wristband is placed around the wrist of the new born baby.

2. The midwife uses a mobile phone to scan the QR Code of the Bubble Tag Wristband using the iCivil App.

A Bubble Tag Wristband is placed around the wrist of the new born baby.
A form opens in order to collect all the information related to the birth.

Once completed, an encrypted SMS is sent to the National Central Server.

The encrypted SMS is processed. A SMS is sent back to confirm safe receipt.

The information are uploaded to the National Register of Civil Status.

Maternity

iCivil Central Server

NEW BORN
- [ ] Male
- [x] Female

FATHER
- [x] First name
- [x] Surname

MOTHER
- [x] First name
- [x] Surname

TIMESTAMP & LOCATION
15/12/2017 – 14:53
Ouagadougou
On presentation of the Bubble Tag Wristband with parents’ ID Document, the Officer can register the birth of the new born baby.

The information are downloaded from the National Register of Civil Status.

A certified copy of the Birth Certificate can be printed with the image of the Bubble Tag.
On presentation of the Bubble Tag Wristband together with his ID Document, the Officer can issue the birth certificate to the Citizen.

The information are downloaded from the National Register of Civil Status.

A certified copy of the Birth Certificate can be printed with the image of the Bubble Tag.

Mayor Office

Operation: Birth Certificate Issuance – e.g. Year 18
COHERENCE OF THE SOLUTION

Physical World

Proof

Digital World

Birth Declaration
Birth registration
Issuing a certificate of birth
Adoption
Wedding
Divorce
Issuing a birth certificate
Death

Digital Birth

Digital Death

* N°14256 is an example
STRENGTHS OF THE SOLUTION

• The Bubble Tag Wristband
  • Ensures the interphase link
  • Can not be duplicated
  • Unique: It is a self-generated chaosmetric 3D code, resulting from a natural phenomenon
  • An unpredictable digital signature
  • Total traceability of actors
  • Digital and electronic authentication
  • Does not break down
  • Durability over 250 years

• Application for Smartphone iCivil
  • Total traceability of agents
  • Guarantee of the integrity and authenticity of the collected data
  • Geolocation of the place of declaration

• Other advantages
  • Compatibility with the communication networks already available
  • Rapid constitution of the national registry of civil status
  • Highly secure ecosystem
  • Declaration and registration of large scale births without risk of duplication,
  • Provision of secure and controllable civil status records
  • Provides reliable, complete and real-time statistics to the authorities, the administration, the technical and financial partners ....
  • Facilitates the planning, implementation and evaluation of the development policies.
Proof of Concept visible in Burkina Faso

Several thousands of children registered in 10 maternities
+ 30% of births registered in the said maternities

Proof of Concept supported with UNFPA funding
THANK YOU FOR THEM

iCivil™
Integrated System for People e-ID