

Technology Choices in Crisis

Challenges in deploying effective software
technology amidst crisis occasioned by
the post election violence in Kenya

ICT4D DOHA



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1. When all was well
2. The Chaos
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Business as usual until 26th December 2007

- Kenya had prepared for General Elections in a very jovial mood with pomp in campaigns
- For the first time all parties had websites for the parties and candidates. Official functions were held to launch the campaign websites
- On the eve of the General Elections 12 million Kenyans had cell phones meaning 1 out of 3 Kenyans could be reached by either phone call or text
- Some websites included www.raila07.com
www.kibakitenaco.ke www.kalonzofoundation.org
- On 26th December 2007 Kenyans closed business for holiday and elections



Business as usual until 26th December 2008



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Sins of Cheating – Still political – We cared less!



Eye for an Eye? Not Political Differences Any More!!



The Impunity – Aggressor - Civilians



The impunity – Aggressor - Authorities



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Cooperation in crisis

- **The Kenya National Commission on Human Rights (www.knchr.org) sent an SOS for partners to assist in documenting the crisis with the goal of ensuring that it does not happen again and bringing those responsible to justice.**
- **No Peace Without Justice (www.npwj.org) who have worked in similar situations in Kosovo, Iraq and Sierra Leone responded to the distress call.**
- **NPWJ hired MediaCorp to develop a solution within 10 days that will help document the crisis.**
- **The client/s did not care what software we used until...**



Choice comes in

- **NPWJ that is based in Brussels called for a fully open source bespoke solution.**
- **KNCHR (of course based in Nairobi) had not experienced FOSS before and were worried time would be wasted in training people on new technology rather than focusing on the job.**
- **Sensitivity of the work demanded customised security deployed such that;**
 - Data Clerks could only view and edit the information they individually had entered.**
 - Analysts could only view and not edit any data**
 - Data had to be encrypted especially to avoid political interference during the investigations.**

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Foss vs Proprietary

“Windows is a very important platform, and our justifiable pride in Linux and the GNU stack shouldn’t blind us to the importance of delivering software that is widely useful. I believe in bringing free software to people in a way that is exciting and empowering to them, and one of the key ways to do that is to show them amazing free software running on their familiar platform, whether that’s Windows or the MacOS.” Mark Shuttleworth

<http://www.markshuttleworth.com/archives/143>

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Blending Windows, FireBird, Apache, PHP and Mozilla



'User Interface' – Using FOSS or Windows?? I don't care!!

The screenshot shows a web browser window titled "Manage Information Records - Kenya National Commission on Human Rights, - Mozilla Firefox". The address bar shows the URL "http://billpc/reports.php?id=327". The page content is divided into several sections:

- Left Sidebar:** Contains navigation links for "Information Records", "Episodes", "Profiles", "Documents", and "Search". There are also "Profile" and "Logout" links at the bottom.
- Central List:** A list of "New Information Record..." entries, each with a unique ID and date, such as "RPT-00001 (2007-12-20)" and "RPT-00002 (2007-12-27)".
- Form Area:** A detailed form for editing a record. It includes fields for "Source" (Interview), "Interviewer" (Joyce Matara), "Interviewee" (Onyando, Kerubo Dina), "Document" (PEV,IVR,FEB,185), "Information Start Date" (2007-10-01), "Information End Date" (2008-01-10), and "Interview Date" (2008-02-13). There is a "Locked" checkbox and a "[view]" link.
- Transcript:** A text area containing the following text:

N/B: not sure of the start date as she mention during the campaign period.

During the campaign period my (Dina) neighbors who were Kalenjins and Lous used to threaten us by saying that we Kisii,s were PNU supporters it was in October, November. They used to pinpoint houses belonging to Kisii,s and kikuyu,s. These were Luo and Kalenjin youths not from the area. This youths were being assisted by my (Dina)
- Buttons:** "Save", "Reset", and "Print" buttons are located below the transcript.
- Footer:** A green bar with the text "• Create Information Link...". Below it, there are two tabs: "Documents" (showing "PEV,IVR,FEB,185") and "Information Records" (showing "RPT-00327 (2007-10-01)").

The Windows taskbar at the bottom shows the "start" button and several open applications: "Mark Shuttleworth - ...", "Manage Informatio...", "Inbox - Microsoft O...", "Presentation3", and "Technology Choices...". The system clock shows "14:29".

Bringing it all together in Foss/Windows

The screenshot shows a web browser window titled "Manage Episodes - Kenya National Commission on Human Rights, - Mozilla Firefox". The address bar shows the URL "http://billpc/events.php?id=116". The browser's menu bar includes "File", "Edit", "View", "History", "Bookmarks", "Tools", and "Help".

The application interface is divided into several sections:

- Sidebar (Documents):** A search bar and a list of episode IDs, including "PEV,IVR,FEB,002" and various "EP-XXXXX" entries with dates.
- Main Content Area:**
 - Information Record:** A form with fields for "Start Date" (2008-01-26), "End Date" (2008-01-26), and "Location" (Kikuyu). A "Constituency" dropdown menu is open, showing a list of constituencies such as "Kabete Constituency", "Funyula Constituency", "Gachoka Constituency", etc.
 - Comments:** A text area containing the text: "On 26th of Janu... heard that they... Kikuyu landlord... Kikuyu country... held in the eve... from a friend... was also suppo... called Njoroge... Tayari, Mombasa".
- Bottom Section:** A table with columns for "Communications", "Vehicles", "Intervenor", "Weapons", "Documents", "Information Records", "Perpetrators", "Victims", and "Witnesses".

The Windows taskbar at the bottom shows the "start" button, several open applications (Mark Shuttleworth, Manage Episodes, Inbox - Microsoft O..., Presentation3, Technology Choices...), and the system clock showing 14:34.

Info Search

System Administrator

Control Panel

- Information Records
- Episodes
- Profiles
- Documents

Search

Profile | Logout

305 results

Search Episode Records

Search: Act

Fields: Arrest

Dated: Assault

With phrase:

- Arrest
- Assault
- Beating
- Burning building
- Burning other
- Burning property
- Car Jacking
- Child soldiers
- Detention
- Discrimination
- Displacement - forced
- Displacement - other
- Dog bite
- Forced Circumcision
- Forced Violence
- Harassment
- Hate Speech
- Hostage
- Kidnapping
- Killing

Constituencies:

A|B|C|D|E|F|G|H|I|J|K|L|M|N|O|P|Q|R
|S|T|U|V|W|X|Y|Z

Clear

- Ainamoi Constituency
- Aldai Constituency
- Alego Usonga Constituency
- Bahari Constituency
- Baringo Central Constituency
- Baringo East Constituency
- Baringo North Constituency
- Belgut Constituency

• EP-00698 (2) *In Eldoret,* 01-16) — (PEV,NWP,JAN,11)
 ...oints on the main roads leading to the town despite a tight security by the GSU personnel, regular and administration police. Those closed were **Eldoret-Nakuru, Ken-Eldoret, Kapsabet-Eldoret and Eldoret-Webuye** highways.

• EP-04463 (2007-12-27) RPT-01026 (2007-12-27) — (PEV,IVR,MAR,816)
 Ruto for **Eldoret** North had organised the oaths. Dogs and cows slaughtered in **Eldoret**. I am the Chairman of displaced people so I have all the evidence. Ruto gave the twenty five cows. We even have the pamphlets that they were using. Mine is in the house I can give you. Ruto and Kones drinking the blood of the slaughtered five dogs and twenty five cows and dressed in



Info Search

Control Panel

- Information Records
- Episodes
- Profiles
- Documents
- Search

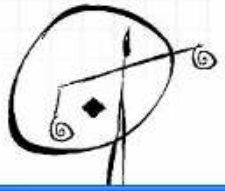
Profile | Logout

FlameRobin Database Admin

Database View Server Object Help

- DOCUMENTS
- EVENTS
- LINK_EVENT_ACTS
- LINK_EVENT_COMMUNICATIONS
- LINK_EVENT_DOCUMENTS
- LINK_EVENT_INTERVENORS
- LINK_EVENT_PERPETRATORS
- LINK_EVENT_REPORTS
- LINK_EVENT_TYPES
- LINK_EVENT_VEHICLES
- LINK_EVENT_VICTIMS
- LINK_EVENT_WEAPONS
- LINK_EVENT_WITNESSES
- LINK_PERSON_GROUP
- LINK_REPORT_DOCUMENTS
- LINK_REPORT_REPORTS
- LOG
- LOOKUP_ACTS**
- LOOKUP_COMMUNICATIONS
- LOOKUP_CONSTITUENCIES
- LOOKUP_DISTRICTS
- LOOKUP_ETHNICITIES
- LOOKUP_EVENT_TYPES

sysdba@localhost:C:\KNCHR\DATABASE.FDB (NONE)



SELECT a.ID, a.NAME, a.REVIEWED

```

1 SELECT a.ID, a.NAME, a.REVIEWED
2 FROM LOOKUP_ACTS a
    
```

Statistics Data

ID	NAME	REVIEWED
1	-1 Other...	T
2	1 Burning building	T
3	2 Burning property	T
4	3 Burning other	T
5	4 Child soldiers	T
6	5 Forced Circumcision	T
7	6 Displacement - forced	T
8	7 Displacement - other	T

sysdba@localhost:C:\KNCHR\DATABASE.FDB 38 rows fetched 1 : 1

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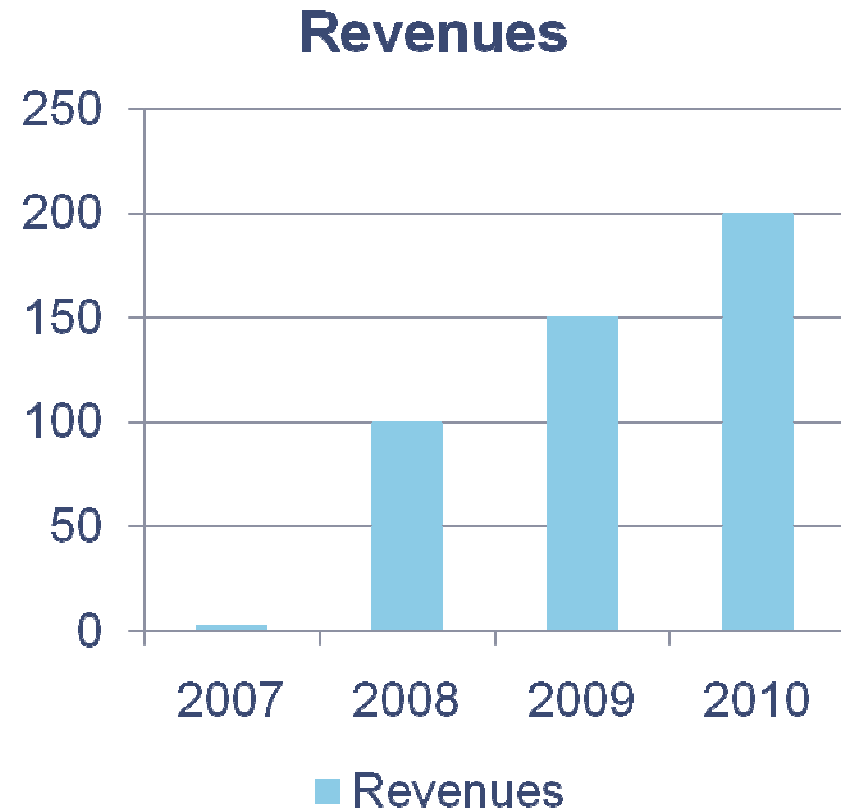
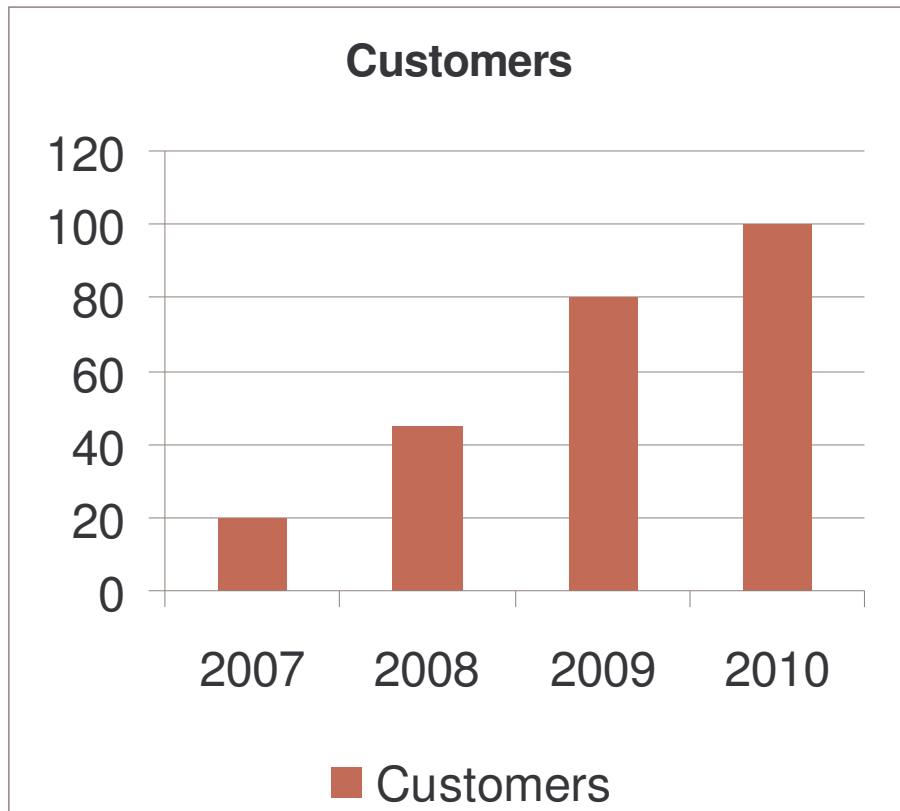
Strength and weaknesses

Strength	Weaknesses
<ul style="list-style-type: none">• Best solution to circumvent choice issues especially for the client. Use hybrid solutions for the client is always right.	<ul style="list-style-type: none">• Porting issues with Windows preferences. Windows services are given priority in port allocation. E.g. IIS will start by default before giving Apache the opportunity to be allocated the port first.

Opportunities and threats

Opportunities	Threats
<ul style="list-style-type: none">• Excellent Business Opportunities where both FOSS and Proprietary software collaborate to deliver turnkey solutions for clients.	<ul style="list-style-type: none">• Reluctance by Windows to play fairly makes the gap for cooperation between FOSS and Proprietary Software (Windows) widen.

MediaCorp Customers appreciating hybrid FOSS/Windows Solutions - Forecast



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