HUMANITARIAN INNOVATION FUND
Final Report
- Please try not to exceed 5 pages (Arial, 12pts) excluding attachments –

Reference Number	
Organisation Name	UNICEF UK

Project Title	RapidFTR: An innovation to speed up and improve the efficiency of family tracing and reunification of unaccompanied/separated children in emergencies
Location	Field testing planned in Uganda, South Sudan and Haiti. Project management in Kampala, Uganda
Start Date	January 2012
Duration	12 months
Total Funding Requested	£149,129

Partner(s)	Thoughtworks, New York University
Total Funding	£388,129

Innovation Stage	Development
Type of Innovation	Product and Process
One sentence description of the innovation	RapidFTR (rapid family tracing) is an open source mobile application and data storage system that helps aid workers collect, sort and share information about unaccompanied children in emergency situations so they can be registered for care services and reunited with their families quickly and efficiently.
Project Impact Summary	

Reporting Period	**November 2012 – January 2013**
Total Spent	

ACTIVITIES CARRIED OUT

The following activities were carried out during the length of the project…

- **Finalization of the Blackberry platform** – the Blackberry platform was developed further, followed by testing and deployment at field level.

- **Software Development** - Android and Netbook platforms were developed for non-Blackberry users to expand usage potential.

- **Field testing** – UNICEF participated in two field-tests of RapidFTR, learning lessons about usage patterns and ways to adapt the system to support current field-level processes in an emergency context.

- **Deployment and Distribution** - A deployment plan was developed with partners in Uganda and South Sudan addressing issues of accountability, monitoring, documentation, training, a rollout strategy and feedback system for the software.

- **Research and Development** – Research and development was conducted to support more advanced data synchronization techniques between netbooks allowing teams to work more effectively when Internet connectivity is not available. This functionality is included in the software.

- **Finalization of RapidFTR technology package**, including the development of user manuals and other documentation, and distribution to partners.

ACHIEVEMENTS

Describe all the results achieved through the activities indicated above and indicate if the project achieved the objective set out.

The development of RapidFTR v1.0 progressed very successfully. Although several factors forced a delay in the initial project kick-off, the software development team from ThoughtWorks, Inc. began its work with UNICEF in the beginning of September 2012 and was largely able to conform to the original six (6) month timeline. After an additional two weeks of "user acceptance testing" at the end of February, RapidFTR v1.0 will be delivered to UNICEF on 08 March, 2013.

As envisioned in the original project proposal, RapidFTR v1.0 includes the following components:

- A basic application for Blackberry mobile phones that was successfully used in field-testing in western Uganda. The field-testing was conducted in November 2012 in collaboration with our partner Save the Children.

- An <u>enhanced Web application</u> including necessary core and secondary functionality
- A <u>full-feature Android application</u> compatible with Android 2.2 and above. The app can synchronize with both a cloud-based instance of RapidFTR, or over wi-fi with the Netbook version – as necessitated in emergency situations where mobile data signals have been disrupted.
- A <u>Netbook installation package</u> for both Windows XP/7 and Ubuntu laptops. The Netbook version can be deployed to a single geographic location with a wi-fi router and several mobile phones to function as a stand-alone RapidFTR deployment in an emergency situation. The Netbook version is also capable of synchronizing with additional RapidFTR laptops to facilitate the sharing of records between separate response locations in an emergency until telecommunications can be restored.
- Initial <u>documentation</u> in English has been drafted in the form of user, technical, and quick-reference guides. Individual sections of this documentation are available through the project's GitHub Wiki pages with proper packaging of the documentation occurring during the final weeks of February.

With the success of the software development, UNICEF Uganda recently signed a Memorandum of Understanding (MoU) with UNHCR, ICRC, and URCS for advanced field testing of RapidFTR's Web and Android applications to support the child protection efforts on-going with refugees from DRC in Uganda. This field test will allow for feedback from the field, as well as the finalization of the training and deployment documentation for RapidFTR.

After signing the MoU, UNICEF led a training, including staff from each of the partners, in Nyakabande Transit Centre and Rwamwanja Refugee Settlement in the middle of February. As a result of the training, four staff are using the Android application in each location, along with their supervisors utilizing the Web application from their offices in Mbarara and Kampala.

In three weeks' time, over 200 child records will have been created in the system.

METHODOLOGY
Describe how the methodology used was or wasn't appropriate to carry out the activities or achieve the objectives set out.

The general methodology followed by the project has produced very successful overall results.

- Initial focus on the Blackberry application allowed the project team to conduct an initial field test early on in the project, producing important understandings for potential usage scenarios in various contexts

- Subsequent focus on developing the Android and Netbook applications resulted in the portions of the system likely to receive the most use and interest in the future to be completed.

- Movement of the technical coordination from New York to Uganda positioned RapidFTR at the field-level in an area of the world in which it may be ultimately used.   This allowed the project to learn important lessons from the field when the latest DRC emergency began, which led to cross-border flows of refugees into Uganda, including unaccompanied and separated children.

- Continued importance placed on the involvement of the open-source community allowed more contributions of ideas and development time by interested volunteers around the world. This has resulted in a clearly-written codebase and a higher level of system quality and sustainability than may have been expected by a closed-source solution.

MAJOR OBSTACLES

Describe all the obstacles faced during the implementation of the project and how they affected the planned activities and results.
Indicate what steps have been taken to address these obstacles.
Indicate whether amendments to the planned activities and objectives have been made.

One of the technical obstacles faced by the project was the involvement of both open-source volunteers and a full-time development team. Much has been written about this interaction in previous reports, but to summarize, this interaction required a change of mind-set from the full-time team members. Extra emphasis was placed on proper documentation of their code to allow someone else to potentially modify it at a later date, in addition to adequately capturing the design decisions in a manner consistent with the highest principles of knowledge management. The open-source community is the key to the sustainability of RapidFTR, and all knowledge about the system needs to be captured in a way that can easily be understood by both current and future members of the community.

Despite the involvement of dozens of open-source volunteers, very few software developers have experience in an emergency context. This is the reason that the involvement from the partners of the Inter-agency Working Group on Unaccompanied and Separated Children (IAWG UASC) played such an important role. The development team utilized the experience of the IAWG members to help answer important design questions such as the necessary levels of security in the system, and the ways that RapidFTR may interact with the various case management systems that support NGO work in these contexts.

BENEFICIARIES/HUMANITARIAN INTERVENTIONS IMPACTED

Indicate the beneficiaries as well as the humanitarian interventions that have benefited from the project.

As the original project proposal stated, "The project's beneficiaries are children and families who have become separated in the chaos of a natural disaster or political emergency."

As RapidFTR has just entered the advanced field-testing phase in February, it is difficult to determine whether there has yet been a direct benefit to any of these children and families. However, it is possible to say that 234 child records have been created in the system from 13 February to 7 March, 2013, and that these records are accessible by the appropriate staff from ICRC, Uganda Red Cross Society, Save the Children, UNHCR, and UNICEF in Uganda. This information is allowing these agencies to provide better protection for these children for the time that they are refugees in Uganda by tracing and reuniting them with the families as quickly as possible.

PARTNERSHIPS AND COLLABORATION

Describe the partnership arrangements and how these may have changed during the course of the project.

ThoughtWorks, Inc. has been the primary software developer throughout the length of the grant. In addition to the team of 11 developers that the HIF funding allowed UNICEF to work with, ThoughtWorks also includes RapidFTR as part of its Social Improvement Programme (SIP). ThoughtWorkers volunteer their time in-between other assignments to these SIP projects - www.thoughtworks.com/social-impact

Additionally, while UNICEF has endeavoured to keep the organizations participating in the IAWG UASC involved at the global level, having the project located in Uganda enabled a unique opportunity to present itself with the beginning of the latest DRC refugee influx in 2012.

With the success of the software development effort, UNICEF Uganda recently signed a Memorandum of Understanding (MoU) with the other Uganda country offices of UNHCR, ICRC, and URCS for advanced field testing of RapidFTR's Web and Android applications. This field test will be continued for the length of time that refugees are still arriving in Uganda, and will allow for vital feedback from the field to better the system, as well as the finalization of the training and deployment documentation for RapidFTR.

Additionally, UNICEF South Sudan and its partners in the South Sudan Child Protection Working Group plan to conduct a comprehensive pilot project in Juba and Jonglei state beginning in March 2013. This pilot will also make use of the

Netbook application in order to test the system in areas of low- or no-connectivity, in addition to the Web and Android applications.

DISSEMINATION

Indicate the steps taken to disseminate project findings/outputs to outside stakeholders.

RapidFTR's project findings have been disseminated in several ways depending on the type of audience.

The open-source volunteers and other software developers have benefited from discussions on the Google Group and IRC chatroom. ThoughtWorks has taken an active role in promoting RapidFTR through the SIP programme, as well as various developer conferences (such as the Grace Hopper Conference held this year in Bangalore, India).

The primary vehicle for disseminating project updates to the humanitarian community has been through the regular meetings of the IAWG UASC. This group includes the most active organizations involved in child protection in emergencies including ICRC, IRC, Save the Children, UNICEF, UNHCR, and World Vision International.

UNICEF also promoted RapidFTR during the recent visit to Uganda of the heads of Innovation from the World Bank Institute, USAID, UNDP, and others. More information about this visit can be found at www.unicefstories.org.

RapidFTR recently featured in an article for Wired.co.uk magazine that highlighted the various initiatives funded by HIF. This article can be found at http://www.wired.co.uk/news/archive/2013-02/25/emergency-technology-feature?page=all.

TRANSFERABILITY

Please indicate if there is any potential to replicate the project and how.

As the RapidFTR codebase is open-source and freely available to any organization that would like to use it, there is no need to directly replicate the project for use by another organization to register children in an emergency context.

However, following the principles of open-source development that have allowed RapidFTR to succeed so far, any organization could adapt the codebase to support their work in other ways. RapidFTR's technologies can be applied to the development of a flexible birth registration system, mapping social service delivery locations in a country (i.e. schools, health centres, etc), or registering

pupils to a new school term. Any process that currently uses paper forms to record and send information for analysis could potentially be done more efficiently by the work that has been completed during this project.

Please find several photos from the most recent trainings that occurred in Nyakabande and Rwamwanja to support the latest "advanced field test" in Uganda.