

From a lab in Luxembourg to satellites in South Sudan

Marianne Donven and Mariko Hall

A new communications platform for use in humanitarian emergencies made its debut in January 2012 in South Sudan, and is now being deployed elsewhere. Emergency.lu aims to be a global inter-agency tool.

The demands placed on the humanitarian community in emergencies are enormously challenging. These are compounded by the fact that the IT and telecommunications infrastructure – critical for efficiently carrying out life-saving operations, though often taken for granted at headquarter level – is frequently non-existent or of poor quality in the field, thereby severely hampering relief efforts.

Recognising this need, in 2010 the Luxembourg Ministry of Foreign Affairs' Directorate for Development Cooperation established a partnership initially with three Luxembourg-based companies: HITEC Luxembourg, SES TechCom and Luxembourg Air Ambulance. A team of representatives from each partner travelled around the world discussing with different relief organisations how they might use private-sector know-how to meet the needs of humanitarian operations. The outcome of this fact-finding mission was 'emergency.lu', a mobile multi-layer communications platform which can provide high-speed internet connectivity and voice telephony services from the onset of a humanitarian disaster. Emergency.lu consists of satellite infrastructure and capacity to provide these essential communication services as well as global information management and actual transportation of equipment to the disaster area.

Emergency.lu offers two different communications 'kits': Rapid and Regular. The Rapid Deployment Kit includes an inflatable satellite dish and a compact ground terminal providing internet and voice communication services and offering a local area network. This Kit is easily transportable (can be taken by emergency workers on their flight) and is intended for the first phase of an emergency response.

The Regular Deployment Kit contains a more robust satellite dish and is deployed at the same time as the announcement of the emergency as part of a second-phase solution. The Regular Kit resembles a standard satellite dish but is specifically designed for emergency operations, without any loose parts, and is quickly and easily installed.

Since its inception, emergency.lu has expanded to incorporate additional partners, including the UN World Food Programme (WFP) which is the global lead of the Emergency Telecommunications Cluster (ETC)¹, the International Telecommunications Union, the UN Office for the Coordination of Humanitarian Affairs (OCHA) and the European Union. Private sector actors, including Ericsson Response and Skype, have also contributed to its development and deployment. In the critical first 72 hours after an emergency, the ETC commits to establishing internet connectivity from a Wi-Fi hotspot

and internet voice communications services within 48 hours of the necessary equipment being cleared through customs; emergency.lu meets these requirements.

Deployment – successes and challenges

In December 2011, while emergency.lu was still being developed, the situation in South Sudan was deteriorating rapidly and the humanitarian community raced to scale up operations to cope with the influx of newly displaced people as well as continuing flows of returnees from Sudan. Relief efforts were severely hampered not only by persistent insecurity but also by limited public infrastructure and cell phone coverage, and by unreliable data connectivity services.

In January 2012, a team of technicians and emergency workers from WFP, Ericsson Response, the Luxembourg government and Luxembourg Civil Protection travelled to South Sudan. After initial testing in Juba, the first deployment of the complete ETC response solution (using the Rapid Deployment Kit) took place in Bentiu town in Rubkona County, where the majority of both government-assisted and spontaneous returnees were being recorded. Regular Deployment Kits were set up in Maban, Renk and Pibor counties. For the first time, relief workers in these four remote locations had reliable access to voice and data communication. Within just six months, this was benefitting more than 3,000 humanitarian workers in South Sudan from 156 organisations.

Deploying one of the world's newest connectivity solutions in the world's newest country did, of course, come with challenges. For example, the extreme weather conditions in Bentiu tested the robustness of the Rapid Deployment Kit and showed that the terminal containing the modem and servers needed a protective cover and the filters cleaned frequently. Frequent power failures were managed by operating two generators at each site as well as having batteries in case all else failed.

The ETC response solution includes a bandwidth management application that monitors what the terminals are being used for and, if exceeded, can limit to priority use. Putting in place and implementing a policy for efficient bandwidth usage was a challenge as each user has different values based on their own needs. Each installation provided a lesson to be learned – and implemented – for the future.

Since then, emergency.lu has also been deployed in Mali, with one Regular Deployment Kit (at the time of writing in late October 2012) deployed in Mopti in the north of the country. A second kit is awaiting its deployment in WFP's warehouse in Bamako. Additional kits will be deployed in Nepal and Venezuela in the coming weeks.



WFP/Arthur Sawmedal

Haidar Baqir, ETC Coordinator, with the emergency.lu rapid deployment terminal in Juba, South Sudan.

The future

Emergency preparedness is a fundamental phase of response. Seventeen emergency.lu kits are pre-positioned around the world, including in Luxembourg and Dubai, for rapid dispatch when the next disaster strikes. The Let's Net training course coordinated by WFP teaches IT emergency workers how to deploy emergency.lu and the complete ETC response solution.² To date, 46 emergency workers from eight different humanitarian organisations have successfully completed this course and are on stand-by for deployment.

In addition to both practical and theoretical training courses, emergency.lu, WFP and Ericsson Response continue to collaborate on developing and expanding the ETC response solution. It is anticipated that emergency.lu and WFP's EPIC³ (Emergency Preparedness Integration Centre) programme will also be integrated

into a single communications and coordination platform for humanitarian emergency response.

In addition to a willingness to learn from deployments to date, open and frank collaboration between public, private and government partners has been critical in developing these tools, with all parties equally committed to contributing their unique experience and knowledge.

Marianne Donven marianne.donven@mae.etat.lu heads the Humanitarian Aid Desk at the Luxembourg Ministry of Foreign Affairs' Directorate for Development Cooperation www.emergency.lu Mariko Hall mariko.hall@wfp.org is Communication Analyst with WFP's IT Emergency Preparedness and Response branch www.wfp.org

1. <http://ictemergency.wfp.org/web/ictopr/emergency-telecommunications-cluster>
For more information about the ETC services, see Mariko Hall 'The only constant is change', FMR 38 www.fmreview.org/technology/hall.html

2. <http://ictemergency.wfp.org/web/ictopr/Lets-Net>

3. <http://globalepic.lu>

World Disasters Report 2012

The *World Disasters Report 2012* focuses on forced migration and displacement, and on the people forcibly displaced by conflict, political upheaval, violence, disasters, climate change and development projects. The report analyses the complex causes of forced migration and its consequences and impacts on displaced populations, their hosts and humanitarian actors. It looks at the significant gaps in humanitarian protection for ever-increasing numbers of forced migrants who do not fit into the conventional categories of protection, and at the public health challenges caused by forced displacement, particularly for women, children and those with mental health problems. It examines the 'urbanisation' of forced migration, the role of climate change and environmental factors in forced displacement, and how new communications, information

and social networking technologies are reshaping the links between aid providers and migrants. It also tracks humanitarian funding for forcibly displaced populations, as well as the positive and negative economic impacts they have on host communities and countries.

The 310-page report is published by the International Federation of Red Cross and Red Crescent Societies. As usual, this year's edition also contains a section on 'Disaster data'. It was edited this year by Roger Zetter of the Refugee Studies Centre.

www.ifrcmedia.org/assets/pages/wdr2012/download/index.html

