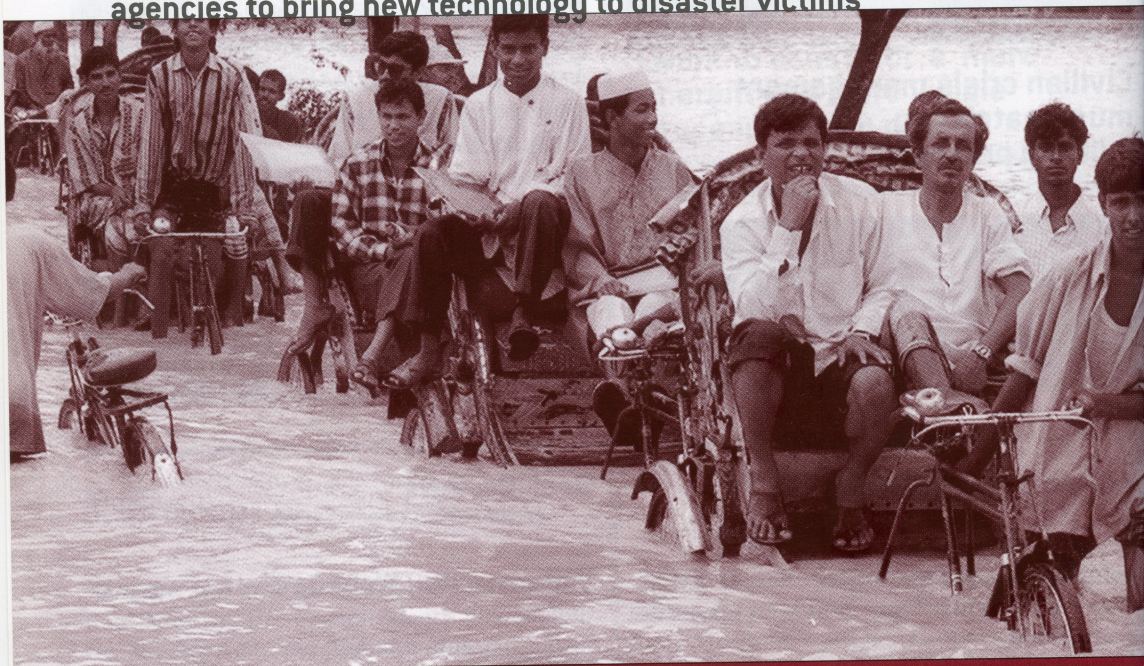


# Crisis information

**Larry Winter Roeder** of the Global Disaster Information Network calls for closer partnerships between industry, NGOs and government agencies to bring new technology to disaster victims



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# is the new relief commodity

**THE NEXT GREAT TECHNOLOGICAL** advance will surely be in the difficult area of handling crisis information. Not only because of the numbers of lives that will be saved, but also because of the wider economic benefits through the use of sophisticated information technology to reduce the impact of potential disasters.

This is a difficult nut to crack because, rather like the Apollo space programme, it requires a marriage of disciplines and co-operation between people who often don't know each other. At present, the links between disaster managers and the information management industry leave much to be desired. A senior relief worker recently said that earthquakes don't kill people, buildings do. He was right. But how can we send the right information in the right format to the right people at the right time - so that city planners can build stronger buildings and relief workers can find lost people in a wild, isolated jungle?

One answer is to develop meaningful public/private partnerships that improve the way we use technology, as well as how we develop new

technologies. But first of all we need to find out who is doing what. Too often, the right hand doesn't know what the left hand is doing. For instance, there are thousands of firms who do valuable work in information management, but there are few reliable inventories. What's more, those that are reliable are not always linked.

## **A reliable portal**

My first proposal is that we must arm ourselves with a reliable internet portal to reliable inventories. We should develop new portals if necessary, make sure they are maintained and that the experts and organisations in the lists are not just good at what they do, but are willing to help when called upon.

*Sharing information can also be a problem because of differences between the social and political conditions of donor and receiving countries*

It is an irony that emergency information management is so misunderstood, given the age we live in. Lives depend on getting the right information in the right format, on time to the right people. However, while users know what they need, they often have no idea what it means in terms of a properly formatted information product. And because information providers are usually not disaster managers, they are often just as baffled.





## PeaceWing

PeaceWing, a project managed by Aerovironment of California, NOAA, the US Department of State and NASA/ERAST, is an example of such a partnership between industry and government.

PeaceWing is a \$5m remotely controlled solar powered wing that flies between ten and twenty miles. It is capable of finding a child in a tree in a forest fire or a flood victim on a roof, geocode that individual and direct assistance to the exact location. Imagine how it could be used over Mozambique, Somalia, North Carolina or the forest fires of the American west. PeaceWing will soon fly 24

hours a day for six months at a time or longer; it will directly complement but not compete with satellites, position itself where it is needed,

when needed and provide cell phone telephony to relief workers without specially designed and expensive iridium type phones.

*Lives depend on getting the right information in the right format, on time to the right people*

This project could revolutionise disaster information and cell phone telephony for

relief workers, effectively giving them free high-speed conversations, and the ability to download imagery and maps quickly. For example, PeaceWing could be based over a volcano like Popo, just south of Mexico City, quietly measuring the rising dome, over the Mediterranean studying pollution and oil spills

or hover over Brazil, watching for fires. But unlike the cell phone towers that blight our highways, PeaceWing is invisible to the naked eye and, unlike satellites that stay above the earth, PeaceWing can be brought down quickly in order to change sensors - significantly lowering the cost of remotely sensed data. PeaceWing won't replace satellites but it will complement them. See <http://www1.etl.noaa.gov/radiom/peacewing>.

### **Funding and sharing**

Funding such projects is inevitably a problem. Even if commercial providers are willing to help, the user may not be able to afford the solution. We need a way to help small town mayors in Somalia, vulnerable firms, cash strapped NGO's and poor national authorities, an idea once proposed to me in the middle of flood torn northern Turkey by Oktay Ergunay, the then head of disaster management. With this in mind, GDIN has created an international fund to buy information for cash challenged NGO's and national disaster managers.

Sharing information can also be a problem either because of differences between the social and political conditions of donor and receiving countries. Some countries won't share data, for fear of cultural pollution or security and economic risks. But the barriers can be broken down as I have found during a series of trips to Sudan and its border areas to discuss information-sharing problems with the rebels and government officials.

### **The Turkish earthquake**

Some governments believe that international disaster information sharing need only be conducted between governments and the UN, leaving NGO's out in the cold. Fortunately for

the many international relief workers operating in the two earthquakes in Turkey in 1999, Ankara took a more mature approach. They requested data from GDIN, the Global Disaster Information Network ([www.gdin-international.org](http://www.gdin-international.org)) and the results were posted on ReliefWeb for all to see.

A computer generated map, provided within a day, blended together information from satellites, ground sensors and other sources into a product that was easy to understand, and revealed the level of damage in cities, on a road to road basis. Using such GIS maps, along with textual products, an NGO like Médecins sans Frontières (MSF) or International Medical Corps (IMC) can compare damage between two towns, do a triage and make an intelligent cost effective decision on what resources to send to which village.

These products were developed in 1996 after a devastating forest fire in

Mendocino National Forest, California. Potential mud slides from winter rains threatened \$250m worth of property. The maps were used to develop an effective mitigation plan by the Forest Service that saved them money in reseeded and saved the public from personal property damage. Imagine the benefits if we could do that in Africa or Latin America.

The potential synergy between industry and government is obvious. Corporations can use these maps to decide where to invest, and cities can use them to decide on building codes. We need to bring the various sectors together into a partnership of industry, governments and the entire relief community. Clearly this can and should be done in a non-predatory way that benefits everyone. The potential of technology is too strong to ignore any longer. ████████████████████

*We need an international consortium that can locate the owners of remote sensing platforms, obtain the right data in the right format on time and then transmit it to the user*