Disaster-relief software developed by San Francisco shipping magnate Lynn Fritz’s charity and rolled out just four months ago is playing a key role in efforts to aid tsunami victims across southern Asia.

Humanitarian Logistics Software, developed over 12 months by the Fritz Institute in collaboration with the International Federation of Red Cross and Red Crescent Societies, is proving central to the IFRC’s operations in India, Indonesia, the Maldives, Myanmar and Sri Lanka.

HLS has helped the Red Cross remain ahead of the chaos that has stricken so much of this global relief effort, said Sanjiv Jain, manager of the IT projects unit at IFRC in Geneva, Switzerland.

"We are responding to emergencies. It’s extremely important in our business to respond in hours rather than days," Jain said. "We are saving at least a few days here, and that means saving a lot of additional lives."

Meanwhile, with the death toll from the Dec. 26 disaster rising to 150,000 and relief efforts failing to keep pace with need, the institute has in recent days fielded 10 "serious" requests for HLS from other organizations, said Anisya Thomas, Fritz’s managing director.

The goal of HLS is to connect all the different constituents in a disaster.

"What happened prior to the software, or what didn’t happen, is a lot of what you’re reading in the newspaper -- donors sending aircraft one place, gifts being solicited, people trying to get into certain airports and no software connecting the whole process," said Fritz, the institute’s founder. "You don’t know what’s happening. Everyone’s doing the best they can under trying conditions, and no one is managing the process."

HLS enables IFRC’s logistics team in Geneva to assess needs and create a list of requirements, which becomes a “mobilization table” for its entire relief operation. It also is the basis for making donation appeals. With HLS, IFRC was able to broadcast its appeals to all 181 Red Cross and Red Crescent chapters, as well as publicly on the IFRC web site. The result: In 10 days, IFRC’s tsunami appeal had 130 percent coverage. Appeals usually take months to cover.

Once the IFRC knows how much has been pledged, HLS provides information on up to 7,000 emergency items that could be mobilized and tracks them all the way to delivery in an affected country. The entire supply chain becomes transparent, and relief workers on the ground can see with a mouse click what has been promised, if it has been shipped, when it is due to arrive.

That worker can then make local arrangements to transport the relief items -- be they medical supplies or water purification pumps -- to where they are most needed.

"We used to manage using spreadsheets, and we did not have any standards," Jain said. "Every time we would have to figure out who’s done what and in what format. It was kind of left to an individual to take the initiative to do things the way he likes in a particular operation. HLS has allowed us to set standards for the whole organization."

Jain estimated that HLS, in combination with more sophisticated Internet techniques, have together contributed to a five-fold efficiency gain. What once took three days can now be done in a few hours, he said, citing the over-funded appeal.

Efficient response
Fritz has been working on improving disaster response since selling his Fritz Companies to UPS in May 2001 and founding the Fritz Institute. He said he wanted to bring the efficiencies and systems of the private sector to bear on disaster relief.

More than 3,000 hours were spent gathering information to understand the nuances of humanitarian aid and development, said Fritz, and the institute’s investment was more than $1 million. The technology can go still farther. Pending further funding and development, Fritz and the IFRC hope eventually to be able to track emergency aid into the hands of its final recipient.
The IFRC has used HLS for every emergency operation it has undertaken since the software became fully operational in September 2004. It was used in Morocco, in Sudan, and in the hurricanes that wracked the Americas last fall. But the Asian tsunami is its largest application to date -- and the IFRC’s largest relief operation ever.

"This time around it’s been used right from day one. There have been no issues," Jain said.

Mercy Corps and World Vision are two relief organizations interested in acquiring a "light" version of HLS, said the Fritz Institute’s Thomas. Such a product will not be available for this disaster, but the institute hopes to create a hosted version of HLS that can be mobilized quickly to respond to specific events.

Fritz Institute will license HLS for free, but interested organizations will have to pay implementation costs ranging between $125,000 and $250,000 for a full-service, customized version such as the IFRC uses.

Leveraging expertise

While the massive scale of the Dec. 26 earthquake-tsunami is highly unusual, logistical problems in responding to natural and human disasters are not new. Since 1970, the number of annual natural disasters and humanitarian emergencies has tripled. In 2002, more than 602 million people’s lives were affected by such disasters. Fritz’s aim with the Institute was to leverage private-sector logistical expertise and, working with humanitarian aid organizations, create systems to address challenges of disaster relief.

"Empathetically, everyone is on the same page and their heroic efforts are all on the same page," Fritz said. "But informationally, if they don’t have a tool like HLS, that impairs the ability of people to coordinate these processes."