

HELPMATCH

PROBLEM STATEMENT

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1 CONTEXT

Disasters of huge scale, scope and consequence like the Tsunami in Asia, Hurricane Katrina in the US, and the disastrous earthquake in Pakistan, have brought two things into sharp focus:

- despite the technology and means of the age we live in, we are massively unprepared to respond adequately to such disasters
- people are compassionate and caring, giving generously, yet wanting to do more to help victims.

Raising funds for the primary relief organizations like the Red Cross, Salvation Army, America's Second Harvest, United Way, and so forth, is essential, and no substitute should be sought for that channel of assistance. But in addition, people want to contribute in more individualized, personal ways. People want to do something that has a personal touch, and makes them feel connected to the saving grace of assisting others in need. Each faces different constraints and has different means to contribute. For example, though many want to help, they are limited in how much cash they can donate to relief agencies and charities. Further, there are those who want to help, but want to find ways to do so without leaving their families, jobs and communities. A lot of opportunity is left untapped.

We need to find ways to connect individuals with a need, to individuals with a means to fill that need. We need a way to connect organizations with a need, to organizations with a willingness to work together to fill that need. Schools are willing to "adopt" affected schools and help with specific needs; families are willing to help families.

But finding out what is needed, by whom, is hard. And it should not be! This is the age of Ebay after all! People across a broad spectrum of circumstance are Ebay literate. In huge volumes, people buy things through Ebay that other people would be willing to give free, even pay the shipping, if they knew it was going to victims of a disaster that needed these things to rebuild their lives.

Consider this scenario: If I could pay \$20 to ship replacement gently-used clothing, books and toys to a family whose child lost these things in the wake of a hurricane, I would expand the value of my contribution many, many times beyond the \$20 in cash it would take to get my "in kind" donation from here to where it is needed. But I cannot find a way to connect my donation with a family whose need it matches.

This scenario is played out over and over again in household after household. We are told "give cash, it doesn't perish, it doesn't succumb to mold in truckloads, it doesn't require armies of people to sort and distribute." But in the months that it will take to recover from Katrina, we can do more than funnel money to urgent-response disaster relief organizations. We can build links between individuals, and between groups, organizations and communities that can provide assistance to those that need it, using the Web.

2 INITIAL VISION

HelpMatch will be a web-based system that will provide the ubiquitous computing engine to match help to need. It will give more people a way to help those impacted by disasters in a direct, meaningful way.

Specifically, the envisaged system will allow:

- individuals and organizations (such as schools, community groups, etc.) who have experienced loss through a disaster to state specific needs
- individuals and organizations to offer specific forms of assistance, and have the system match needs and givers
- match individuals and organizations with registered general needs to individuals and organizations that have made offers to collect the necessary goods and services to meet the needs expressed
- shippers to donate services to ship goods, and individuals and groups to donate funds to pay for shipping, so that it will be an option for givers to have shipping costs paid to get their donation to its destination, with shipping labels created by the HelpMatch system.

HelpMatch will be managed by a non-profit organization that will rely on donations to supply computing infrastructure, internet services and time donated by technologists to build and run Help-Match.

3 STAKEHOLDERS

3.a Those with needs

- People facing loss of home and livelihood, facing a variety of needs as they rebuild their lives.
- Community groups and organizations in need.
- Organizations who help people and organizations in need.

3.b Those who want to help

- Individuals and families who would like to help other individuals and families.
- Community groups and organizations that would like to rally support to help in tangible ways.
- Money donors to fund internet services, shipping, etc.

3.c Those who will donate start-up funds, computing infrastructure or special skills/time

The organization will need business, legal and technical expertise, and to the extent that these are donated, the organization can get further with less start-up funds from donors.

3.d Those who have been co-opted to donate skills to help start up this initiative

Yes, that's you! You are the architecture team, and you have been chartered with creating the architecture for this system, and possible future variants of this system that fit the theme of disaster response co-ordination.

4 PRELIMINARY SYSTEM DESCRIPTION

4.a HelpMatch

The HelpMatch system allows people with limited web expertise to register for assistance and specify needs, or to register help that they can provide. Likewise, it allows people with limited web experience to look for a match in terms of expressed need or volunteered assistance.

We will need to explore ways to allow those who have been impacted by a disaster to register their need while protecting willing givers from abuse and fraudulent claims of need. We will also need to explore ways to match need and giver. For example, matching organizations in impacted areas with similar organizations elsewhere.

While the need for such a system is evident, its success depends on how quickly and broadly it is adopted. The "network effects" are paramount. Craig's List is a low-cost, low-tech facility run on a

small budget by a relatively small staff (I read 12 people, but do not know if this number is current). It is successful because it is used. HelpMatch will be successful only if it meets the needs of both critical sets of stakeholders: those impacted by disasters and those who are willing to help. To make the system successful, we have to understand what it will take to get people in large numbers to sign up to accept help and in large numbers to give help.

The HelpMatch system should scale so that the wellspring of goodwill following a disaster will be met with a trusted outlet to funnel assistance to those in need. The system load will also spike as those needing assistance are able to reach internet access points to register their need. System load may also spike at times like the end of the year, when the spirit of giving and the last chance to make tax-saving donations for the year coincide.

5 “COMPETITORS” OR OTHER ALTERNATIVES

- Craig’s List
- Network for Good
- FEMA

6 SYSTEM RELEASE TIMEFRAMES AND STAFFING

The architecture team is in place, and the HelpMatch development team will be formed as volunteers come on board. An iterative development process will be used, so that the first iterations of HelpMatch can be released to aid the relief effort as soon as possible. The architecture team needs to plan for this incremental deployment, as well as the use of a “flex-force” of volunteer developers.