The Computerworld Honors Program

Honoring those who use Information Technology to benefit society

Final Copy of Case Study

YEAR:
2012

STATUS:
Laureate

Organization name:
United States Postal Service

Organization URL:
www.USPS.com

Project Name:
Delivery Confirmation Problem-Resolving Application (DECOPRA)

What social/humanitarian issue was the project designed to address? What specific metrics did you use to measure the project's success?

The Postal Service's Network Distribution Centers handle virtually all the Priority Mail and other parcels throughout the U.S. Many of these parcels may have incorrect barcodes -- for example, when a customer incorrectly enters a ZIP code associated with a delivery address, which may also be embedded with an identification code as well. Consequently, the parcels, which are often handled almost entirely by machine except for the last mile, may end up looping from facility to facility when left unchecked. In order to prevent these looping parcels, the DECOPRA program was developed (Appendix1). DECOPRA offers much-needed technology by allowing various personnel to act on specific Delivery Confirmation issues. For example, if a parcel has been "flagged" for examination, the program will automatically send special personnel an e-mail, alerting them that the parcel has been inducted in the facility and where it currently resides within the facility so that it can be recovered, and the address corrected if necessary. Parcels that have exhibited looping characteristics are automatically sent down a particular roller table, where clerks can employ scanners used in conjunction with DECOPRA to ascertain what problems were created. Likewise, electronic technicians may also use the program on parcels with identification numbers to tell if there are any existing issues with the optical character readers, thus improving delivery.

Please describe the technologies used and how those technologies were deployed in an innovative way. Also, please include any technical or other challenges that were overcome for the successful implementation of the project.

The program uses Visual Basic and Samba to communicate with several UNIX-based servers that are employed to sort parcels in an easily understood GUI, which virtually any user can employ via the Windows-environment (Appendix 2). When a parcel is scanned, it creates a text file on the server, which is then retrieved via Windows and analyzed. Specific information regarding the parcel is displayed. The identification number is then cross-referenced via another file that is automatically generated when a parcel is flagged, and if the parcel was flagged, the clerk will see a specific message alerting the clerk that the parcel is flagged (Appendix 3). Timed events also cross-check the current time with a generated message every five minutes, and if flagged parcels are inducted within that time frame, a message is automatically dispatched via the Outlook server to concerned personnel. It proved challenging to be able to have the data shared and checked within the UNIX environment by a Windows-based app, and then have e-mails sent automatically on local user accounts without e-mail.

Please list the specific humanitarian benefits the project has yielded so far.

The program has helped tens of thousands of people across the country to receive their mail in a timely manner, whether they know it or not. Often, older people order prescriptions through the mail, and the program has helped many of those with errant addresses to be received in a much shorter manner.

Please provide the best example of how the project has benefited a specific individual, enterprise or organization. Feel free to include personal quotes from individuals who have directly benefited from the work.

One lady who looked online at the USPS.com website and noticed that her parcel had been looping had put in a request for it to be held out, which was relayed to us. We were able to capture her parcel, and determine that it was looping as a result of a bad ZIP code that had been provided, which was associated with a Delivery Confirmation number. We corrected the ZIP code problem, and the parcel made it to the lady in a timely manner afterwards. She was ecstatic, as it contained personal photos of a recently deceased relative and was irreplaceable.