Emergency Notification System

Report on Initial Test

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Background

During the spring of 2008, OSU led an Oregon University System wide RFP procurement process for a hosted Emergency Notification System which would be capable of notifying campus communities in the event of an emergency with a multi-modal approach. Specifically, the RFP asked respondents to be able to send alerts via email messages, text/SMS messages, voice calls, RSS feeds, and CAP messages for 911 centers with the expectation that no one method would be 100% effective in reaching the entire population. Indeed, even with all 5 modes it would be we could not guarantee 100% contact, however, all institutions felt time would be of the essence in an emergency and coordinating all reasonable means available in one system would be the responsible approach. As a result of the RFP, the Connect-ED service from Blackboard Connect (BBC) was chosen and a contract for service was executed July 1, 2008 with OSU licensing 26,000 contacts (people) in the system.

OSU then embarked on a rapid deployment plan to ensure the system would be in place and functional by the start of classes Fall Term 2008. The plan, approved by the Provost, involved populating the system with basic information from Banner to provide an authentication framework in order to leverage the vendor provided portal for Faculty, Staff, and Students to be able to login and provide whatever appropriate emergency contact information they desired in addition to the base information of email address (and work phone number for employees.) The plan included also leveraging work by the emergency preparedness committee which had identified 8 to 10 scenarios where emergencies with life safety concerns would dictate a campus wide notification. Originally envisioned as email notifications only, this new system would allow a more comprehensive notification once the decision had been made to notify campus using those guidelines.
The system was populated with 25,000 Contacts for employees and students, designating the likely location of Newport, Corvallis, Bend, or other, by late September 2008. Communications to campus about the system went out starting Oct. 15th and included articles in the barometer, message from the Provost to inform lists, article in Life@OSU, and local press coverage. A test of the system was scheduled for November 10th and the OSU community was encouraged to sign-in and provide additional emergency contact information.

**Purpose of the Test**

There were three purposes for which we conducted the test. The primary objective was to verify performance by the vendor and to identify performance issues either by the vendor or by OSU systems. The second objective was to raise the awareness of the OSU community about the system and to encourage more people to log in and provide correct contact information. The third objective was to familiarize OSU emergency response staff with the function and operation of the system so that existing procedures could be adapted to this new tool and the emergency preparedness committee could review its use in line with existing operational plans.

**Primary Objective - Performance**

**Summary:** Email, text messages, and phone calls to mobile devices and telephones outside of the OSU Phone system worked extraordinarily well with most people receiving the alert between 1 and 9 minutes of the alert being sent. Numbers within the OSU Phone system; however, did not receive the alert in a timely fashion with some numbers not getting the call until just over an hour after the alert was sent.

**Analysis:** As part of the Connect-ED service, BBC had worked with OSU to set parameters on the voice calling to ensure that our local phone system was not overwhelmed. This “call throttling” was intended to be set at 70% of our overall inbound call capacity. Due to miscommunication between the vendor and OSU, this call throttling was actually set to 30% of our overall inbound call capacity. This error has since been corrected; however, OSU Network Services has calculated that with the parameter set correctly alerts to the OSU Phone system will still take up to 40min to deliver. This is significantly longer than the stated goal of 7 minutes and less than the contracted window of 15 minutes; however, the capacity bottleneck is clearly on OSU’s side and OSU Network Services is working to find a cost effective means to accommodate the peak load this system would require.

In addition to call throttling parameters, OSU worked with BBC to set email throttling parameters to similarly prevent email system overload. While those parameters did not prevent reasonable delivery of email messages we believe the
delivery time could be and should be significantly improved and OSU Network Services will work with BBC to fine tune those parameters before future tests.

**Second Objective - Participation Levels**

**Summary:** Prior to the test we had, of course, populated a work phone number for all staff. In addition to the default information we did see significant participation by faculty and staff in updating their emergency contact information including providing cell phone numbers and text/sms phone number; however, we had extremely low participation by students. After the test we did see an increase in participation by both groups; however, a significant percentage of students still have not participated. Anecdotally, we have heard that students still are concerned that OSU will use the contact information provided for purposes other than emergency notification.

**Analysis:** Prior to the test we had the following participation numbers (as of 11/5)

Contacts with Home phone set:
- Other: 12
- Staff: 712
- Students: 324
- Total: 1,048

Contacts with Mobile phone set:
- Other: 17
- Staff: 820
- Students: 1,102
- Total: 1,939

Contacts with SMS set:
- Other: 10
- Staff: 438
- Students: 855
- Total: 1,303

As of today (12/5/08) we have the following participation numbers:

Contacts with Home phone set:
- Other: 24
- Staff: 869
- Students: 488
- Total: 1,381

Contacts with Mobile phone set:
- Other: 55
- Staff: 1005
Students: 1,633
Total: 2,693

Contacts with SMS set:
  Other: 25
  Staff: 538
  Students: 1,271
Total: 1,834

**Third Objective – Staff Familiarity**

**Summary:** Creation and delivery of test message went as planned and was observed by emergency preparedness committee to be able to judge effectiveness of tool.

**Analysis:** There is no technical aspect of this objective to analyze.

**Conclusion**

**Overall assessment:** Fair. BBC report indicates 27.3% successful contacts by phone (receipt of email and Text messages were not verified) and overall reception by staff was positive.

**Work to be done:**

- Students need to be convinced to add more info
- Voice calling into campus needs to be optimized
- Email into campus needs to be optimized
- RSS feeds and CAP alerts need to be implemented and integrated into additional means of notification.