Emergency Notification System at Virginia Tech

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Emergency Notification Systems (ENS) and Higher Education

- Virginia Tech; Morva Incident, August 21, 2006.
- All of Higher Education considering ENS systems following April 16th tragedy.
- October 2009; final regulations to Higher Education Opportunity Act promulgated.
Higher Education Act

“...immediately notify the campus community upon the confirmation of a significant emergency or dangerous situation involving an immediate threat to the health or safety of students or staff occurring on the campus ... unless issuing a notification will compromise efforts to contain the emergency.”
Initial System Selection Criteria (2006)

- Test message using Short Message Service (SMS) protocol
- E-mail
- Web posting
- Voice communication to cellular and/or land line phone
Initial System Selection Criteria (2006)

- Flexibility in registering or subscribing user.
- Redundancy of critical systems and data.
- Dispersed messaging; system needs to address saturation of communication channels.
Developed a Unified Portal for Varied Channels

- Mobile device – (VT Phone Alerts)
- Blast e-mail
- Computer Modules (VT Desktop Alerts)
- Web site alerts
- Classroom digital signs
- Recorded Hotline
- Campus sirens and loudspeakers
- Public media
- Switchboard
Single Web Portal to Access Multiple Channels

[Image of the Virginia Tech Emergency Notification System interface]

- SCENARIOS: Emergency, Bomb Threat, Inclement Weather
  - Custom: Health Threat, Shooter On Campus

- MESSAGE: HEADLINE
  - Virginia Tech Emergency Notification

- SYNOPSIS

- CHANNELS: VT Homepage, Classroom Signs, E-mail (Listserv), Desktop, Twitter, RSS, Phone, SMS

- TEMPLATES

- SCENARIO HISTORY
  - No message history for the selected scenario
From: VT Alerts <alerts-ins@cns.vt.edu>
Subject: University Closed Until 10 a.m.
Date: September 4, 2008 12:39:01 PM EDT
To: Multiple recipients <LISTSERV@LISTSERV.VT.EDU>

Weather Advisory: University closed until 10 a.m. See VT homepage or call 231-6668 for details.
Thursday, January 24, 2008

To the Virginia Tech Community:

Due to inclement weather conditions, the Virginia Tech campus in Blacksburg will be closed on Thursday, January 24, 2008. University staff designated "emergency personnel" must report as instructed by their supervisor.

Classes scheduled to start at 8 a.m. and 9:30 a.m. have been canceled and will not be rescheduled. Classes beginning at 11 a.m. will be held as scheduled.

For the latest information, visit the Virginia Tech Homepage (www.vt.edu) or Virginia Tech News (www.vtnews.vt.edu), call the campus hotline at 231-6668 or University Switchboard at 231-6000 or listen for announcements on WVTW-FM 89.1
Mobile Device
VT Notification Systems

Web site alerts
VT Notification Systems

Electronic Message Boards

- 358 electronic message boards in all general assignment and most other classrooms
  - Messages sent instantly
  - Messages preceded by audible tone.
  - 150 +/- more being installed
VT Notification Systems

VT Desktop Alerts

User-Initiated Test

This is just a test of your VT Desktop Alerts settings.

Id: AEE47949-4F7E-46D9-9DD2-6ED106C2880

Dismiss
VT Alerts Utilization

VT Alerts Notifications; Oct-09 to Mar-10

TIME (minutes)
ENS Attempts

![Graph showing ENS Attempts from 2:55 AM to 3:19 AM with a peak at 3:00 AM.](https://example.com/ens-attempts-graph.png)
ENS Call Result Chart

- Confirmed: The message recipient confirmed receipt via phone, email, or SMS
- Not Confirmed: Receipt of voice message, email or SMS not confirmed
- Connected: Member Hung Up
- Not Connected: No answer, line busy, no ringback, out of service
Messaging

This is a test of the VT Alerts System. Thank you for your participation.

This is a test of the Vermont Alerts System. Thank you for your participation.
Message Characteristics

- All VT ENS messages will contain, at minimum, the following information.
  - Nature of the incident
  - Location
  - Actions to be taken
Operational Issues

- Notification – Capability creates expectations.
- Notification systems – Will it work? How long to complete notification? Does the system have sufficient capacity?
- When do you send a notification? What is actionable? What about false alarms? Using alerts too often?
Emergency Notification System Protocols

The Virginia Polytechnic Institute and State University

January 2010
ENS Protocols

- Formalizes intent of the ENS
- Provides a SOP
- Removes ambiguity
- Creates a legally defendable position for actions taken
<table>
<thead>
<tr>
<th>Scenario</th>
<th>IMMEDIATE</th>
<th>URGENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flooding or water main Break</td>
<td>Flood at <em>(LOCATION)</em>-Seek higher ground-follow instructions from authorities-Do not attempt to drive (100)</td>
<td>Flood at <em>(LOCATION)</em>-Seek higher ground-follow instructions from authorities-Do not attempt to drive (100)</td>
</tr>
<tr>
<td>Roof failure or other structural damage</td>
<td><em>(NATURE OF INCIDENT)</em>-Evacuate <em>(LOCATION)</em> immediately-Follow instructions from authorities-All others avoid area (112)</td>
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</tr>
<tr>
<td>Utility failure</td>
<td>N/A</td>
<td><em>(NATURE OF INCIDENT)</em>-<em>(LOCATION)</em>-Follow instructions from authorities-Avoid area (81)</td>
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</tbody>
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What’s Next at Tech?

- Regionalization of ENS system.
- Incorporate fire alarm enunciators into ENS.
- Linking blue light phones to siren system.
Purpose

- Protocols define the goals of ENS
- Establish the procedures for activating the VT ENS
- Authorize decision-making at the operational/response level when needed
Authorized University Officials

- University President
- VT Police Chief
- Senior Office on Duty
- Other designated university official(s) who are directly involved with safety-and-security.
Message Characteristics

- All VT ENS messages will contain at minimum the following information, in this order:
  - Nature of the incident
  - Location
  - Actions to be taken
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ENS Activation Flow Chart

1. Threat or emergency situation reported to VTPD or Authorized Univ. Official

2. VTPD or Authorized Univ. Official confirms the situation immediately threatens life safety/security of campus population

3. VTPD or Authorized Univ. Official determines that a notification will not compromise the University’s efforts

4. VTPD Senior Officer on Duty or Authorized Univ. Official authorizes emergency notification
Additional Issues

- Reliance on too few systems? *No single system does it all.*
- Cell Phone Network capacity during emergency.
- Others will absorb your capacity in real emergency.
- Example: Cell phone, campus e-mail; internet.