

Detailed Analysis of U.S. College and University Annual Clery Act Reports

Executive Summary

The level of sophistication of mass notification systems in use at institutions of higher learning throughout the United States varies greatly. Size, type and location of colleges and universities are three factors that appear to have a direct correlation to the complexity or lack thereof of mass notification systems in use.

Experts from Siemens Industry, Inc. analyzed information provided to the Federal government and general public as part of The Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act (Clery Act) to gain a better understanding of the current state of mass notification system implementations on college and university campuses in the United States today.

Key Findings

- Every academic institution reviewed had at least one way to communicate with the campus community during an emergency.
- Web-based alerting, including SMS/text, email, website postings and voicemail, were the predominant mode of communication.
- Community colleges are the least likely to have a layered, emergency notification system in use.
- Southern schools had the most sophisticated systems in place, with the highest number of those rated mature.
- The larger the school, the more likely they are to have a sophisticated emergency communication system in place.

Background

At any given moment, members of the campus community might be engaged in any number of activities on or off campus - learning, studying, working, eating, exercising or having fun. But no matter where they are, what time it is or what they are doing, it is imperative that they are promptly alerted in the event of a crisis.

Well-planned mass notification plans and procedures are not only important in protecting the health and well-being of students, administrators, faculty, staff and visitors. If a disastrous situation occurs, the absence of immediate, actionable notifications can open the school up to legal liability and financial exposure, and negatively impact its public perception.

A multitude of communications tools are available today to instantaneously and simultaneously send messages and alerts to large groups of people. However, no one tool is capable of reaching everyone at once. Comprehensive, multi-modal mass notification systems that incorporate various layers of messaging and are managed from a single command center are the most effective way to reach the maximum number of people and ensure consistency of message.

To better understand the current state of mass notification system implementations on college and university campuses in the United States, experts from Siemens Industry, Inc. analyzed information provided to the Federal government and general public as part of The Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act (Clery Act). The Clery Act is a federal mandate requiring all institutions of higher education that participate in the federal student financial aid program to disclose information about crime on their campuses and in the surrounding communities. Enforced by the U.S. Department of Education, the Clery Act affects virtually all public and private colleges and universities. Failure to comply can result in fines and sanctions by the Department of Education, as well as negative publicity that can have a damaging impact on an institution's reputation.

Under the Clery Act, institutions are required to submit an Annual Security Report each year by October 1. The report provides policy statements regarding various safety and security measures, descriptions of campus crime prevention programs, crime statistics for the prior three years, and procedures to be followed in the investigation and prosecution of alleged sex offenses. Timely warning policies and emergency notification procedures are among the information included in each institution's Annual Security Report.

Scope

Siemens mass notification experts analyzed a random sample of 77 Clery Reports filed in 2010 to better understand the level of sophistication of mass notification systems currently in use at institutions of higher education throughout the United States. The analysis included 34 private, 31 public and 12 community colleges from each of the four regions of the United States as defined by the U.S. Census Bureau – Northeast, Midwest, South and West. School enrollments ranged from 1,000 to upwards of 100,000 students.

Methodology

The 2010 Annual Security Report available online for each academic institution in the sample was reviewed in its entirety. Specific emphasis was placed on sections describing timely warnings and emergency response procedures, which typically outlined the various modes of communication in use when an imminent threat is present on campus. Identified communication modalities generally fell into four primary categories:

At Your Side	SMS/text, email, voicemail, call-in emergency hotline, university website, internal portal, blog
Inside	Indoor public address system, digital signage, desktop alerting, tone alert radios, voice-enabled fire alarm panels, posted notices
Outside	Outdoor public address system, warning sirens, mobile loudspeakers on vehicles, blue light towers/outdoor emergency phones
Extended	Social media (Facebook, Twitter), CCTV

Based on the total number of modalities implemented on campus and the number of categories represented, each institution of higher learning was placed in one of five maturity levels.

Level 1: Rudimentary	The most simplistic emergency notification capabilities, generally consisting of a non-layered approach with less than three modalities in one, possibly two, categories.
Level 2: Multi-Dimensional	A non-layered approach to emergency communications incorporating between four and six different modalities in one or two categories.
Level 3: Complex	A more sophisticated system including between six and eight modalities in two to four categories.
Level 4: Mature	A multi-layered approach to mass notification with some degree of integration among layers. Includes more than eight modalities in at least three categories.
Level 5: Holistic	An integrated, multi-modal approach to mass notification consisting of more than five layers of technology with streamlined activation and consistency across messaging layers.

Findings

While every academic institution reviewed had at least one way to communicate with the campus community during an emergency situation, 13 percent were placed in Level 1 and 36 percent in Level 2 due to the simplistic, non-layered approaches described in their Annual Security Reports. In 29 percent of the schools placed in Level 1 or 2, "At Your Side" technologies including SMS/Text, email, website updates and calls to cell phones and landlines were the only emergency communication vehicles available. These same "At Your Side" technologies dominated the modes of communication at all levels.

For the remaining schools, 35 percent were placed in Level 3 and 16 percent in Level 4 due to the broader range of modalities and categories represented in their emergency notification plans.

Seventeen percent of the academic institutions evaluated had methods for communicating using all four categories – At Your Side, Inside, Outside and Extended. Thirty-one percent used modalities in 3 of the 4 categories.

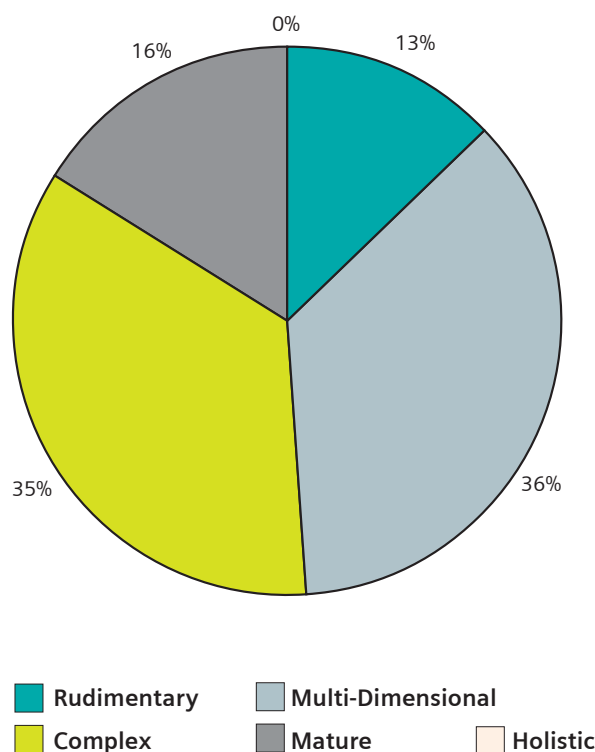
None of the Clery Reports examined clearly describe the integrated, multi-modal approach to mass notification that signifies a Level 5 school. Though one might guess that some of the Level 4 schools operate from a single control center with layering and redundancy of message, the Clery Reports do not specifically highlight this information. Therefore, none of the schools were placed in Level 5 in the analysis.

MNS Implementation by Type of School

Whether an academic institution is a 4-year public school, 4-year private school or a community college appeared to have some impact on the sophistication of their mass notification system.

Overall, community colleges seem to be the least likely to implement a layered, emergency notification system with 75 percent of the community colleges evaluated ranking as Level 1 or 2. The highest occurrence of Level 1 schools was community colleges at 25 percent, as compared to 18 percent of private schools and only three percent of public schools. None of the community colleges analyzed demonstrated a layered approach meriting Level 4 status. Given that many community college students may be working on a two-year Associates Degree, taking a year of general education courses before transferring to a four-year school or attending continuing education classes for only a semester to enhance their skills, the reliance on web-based communications is cause for concern. The likelihood that visitors and short-term students will receive emergency messages from

College and Universities by Level



other modalities including sirens, public address systems and digital signage is far greater than web-based "At Your Side" technologies, and yet these other modes of communication are virtually non-existent on the community college campuses reviewed.

At the other end of the spectrum, 61 percent of the public universities assessed ranked as a Level 3 or 4, with several modes of communication that can effectively reach students, faculty, staff, administrators and visitors quickly and easily. Only one of the public schools reviewed was a Level 1, relying on SMS/text, email and voicemail to communicate with the campus community. The remaining public schools have between four and 12 notification modalities in use on their campuses – the most impressive numbers of the different types of schools analyzed. Since 77 percent of the public schools have more than 8,000 students currently enrolled, there appears to be a direct correlation between the size of the campus and the sophistication of the mass notification systems – bigger schools generally have more complex notification systems in place.

Private schools rank middle of the road in terms of their emergency notification system implementation. Of the private schools analyzed, 70 percent ranked as a Level 2 or 3, with moderately sophisticated systems in place.

Private schools have the largest number of Level 3's in the sample, with 38 percent of schools considered "complex" in their implementations. Although "At Your Side" technologies still dominate the landscape, many of the schools had at least one or two additional modalities available for communicating in the event of an emergency.

MNS Implementation by Region

To better understand whether geography has an impact on emergency notification systems, the institutions of higher learning included in the Clery Report analysis were reviewed based on their location. The schools hailed from each of the four regions in the United States as defined by the U.S. Census Bureau – 19 from the Northeast, 18 from the Midwest, 21 from the South and 20 from the West.

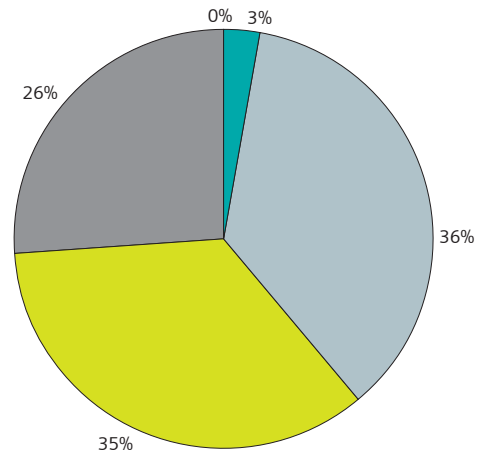
The Northeast showed the lowest level of sophistication among the four regions, with no schools ranking as a Level 4. 68 percent of Northeast schools ranked as a Level 1 or 2, with 16 percent exhibiting rudimentary capabilities and the majority demonstrating multi-dimensional systems.

The highest concentration of Level 1 schools was in the West, with 20 percent of the schools relying solely on web-based methods including SMS/text, email and phone notifications. Of the entire sample of 77 institutions examined, four had only one or two modalities in place and three of those reside in the Western United States.

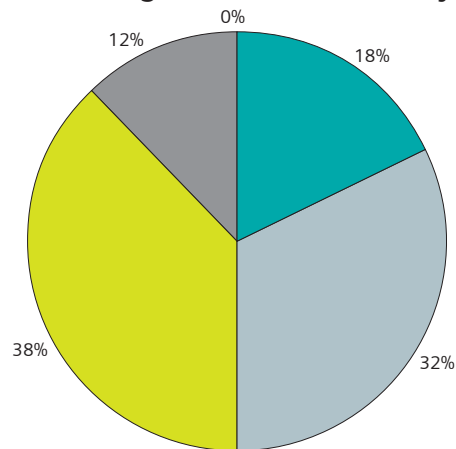
Midwestern schools were moderate in their mass notification implementations, with 83 percent of the sample ranking as a Level 2 or 3. 22 percent of the schools in the Midwest utilized communications capabilities in all four categories – At Your Side, Inside, Outside and Extended – compared to only 5 percent of Western schools.

Southern schools showed the highest level of sophistication, with the largest number of Level 4's of any region. 71 percent of the Southern schools ranked as Level 3 or 4, making the South the most mature region in the sample in terms of mass notification system implementations in the country. Twenty-nine percent of the schools in the South used a layered approach that included modes in all four categories. In the seldom exhibited, Extended category, nearly half of the schools in the total sample that use Twitter and Facebook to communicate during emergencies reside in the Southern region.

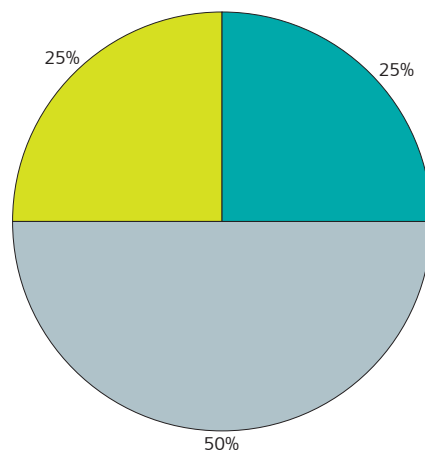
Public Colleges and Universities by Level



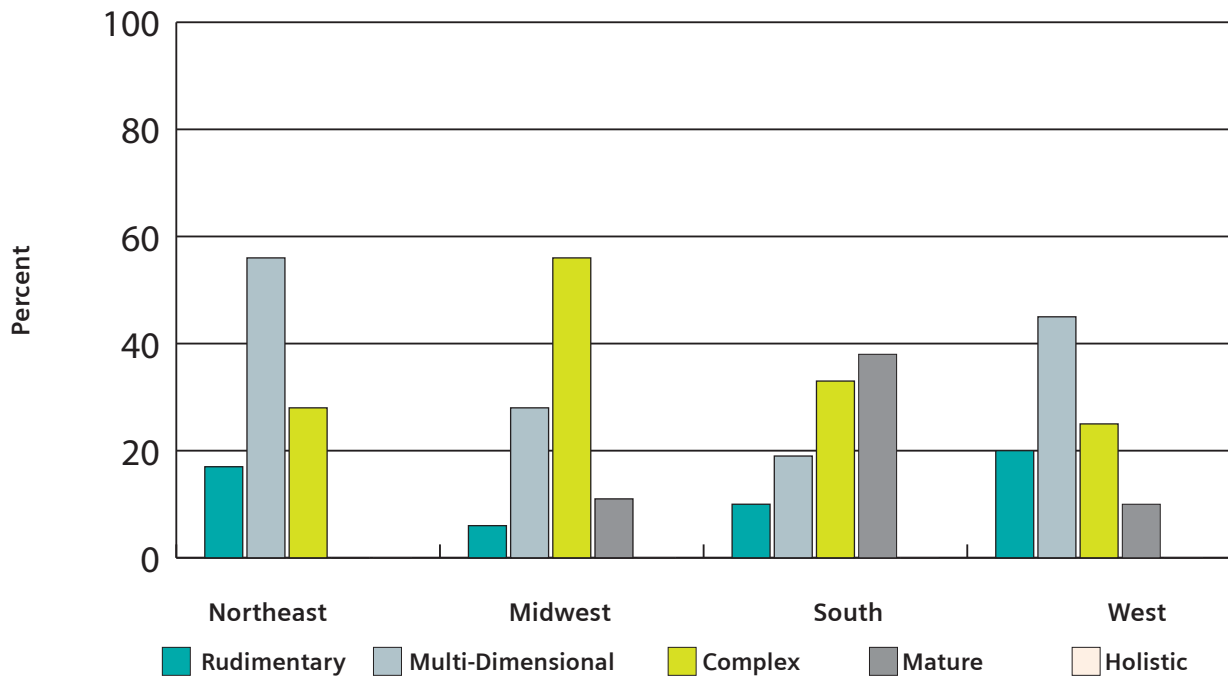
Private Colleges and Universities by Level



Community Colleges by Level



College and University Levels by Region



MNS Implementation by Size

School enrollments range from 1,000 to upwards of 100,000 students at the college and university campuses reviewed in the study. Not surprisingly, there appears to be a direct correlation between the size of the school and the sophistication of the mass notification systems in use.

Among the schools analyzed, those with enrollments over 8,000 students are more likely to have multi-layered notification systems. 21 percent of universities in this category ranked as Level 4, as compared to only 10 percent of schools with fewer than 8,000 students enrolled.

In contrast, 11 percent of universities with enrollments of more than 8,000 students had rudimentary notification systems in place, as compared to 15 percent of schools with fewer than 8,000 students enrolled. All of the Level 1 schools with smaller enrollments were private institutions, whereas 75 percent of the larger, Level 1 schools were community colleges.

The majority of schools with enrollments of more than 8,000 students (42 percent) fell into Level 3 with anywhere from six to eight modalities in three or four categories. The majority of schools with enrollments less than 8,000 students (46 percent) ranked in Level 2 with four to six modalities in one or two categories.

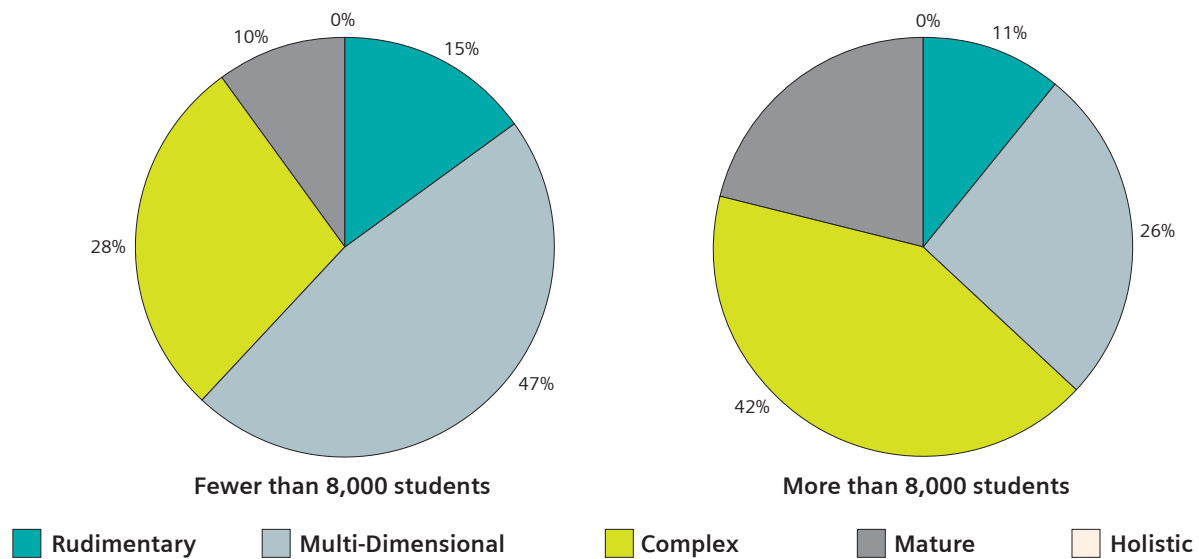
Prevalent Modalities by Category

Colleges and universities use a variety of methods in their efforts to reach students, administrators, faculty, staff and visitors in times of crisis. Every school analyzed had at least one way to communicate with their campus community. The most sophisticated school had 12 different touch points that could be used to share important emergency information. The majority of the schools (97 percent) fell somewhere in between, with anywhere from two to 10 modalities ready to be used if the need arose.

As noted in earlier sections, these communication tools fall into four main categories – At Your Side, Inside, Outside and Extended. All 77 colleges and universities in the study had at least one “At Your Side” modality available for use. 87 percent of the schools had implemented three to five of the “At Your Side” modalities, with seven modes marking the high at one school in the West.

Of the “At Your Side” modalities, email was the most prevalent followed by SMS/text, website postings and phone alerts. Twenty-two percent of schools noted an emergency phone line where people could call in to gather the latest information. A small number of schools increase their reach through the use of internal web portals and blogs.

College and University Levels by Size



Less prevalent on college campuses is the use of digital signage, indoor public address systems and desktop alerting software to share emergency information with the community. Fifty-one percent of the institutions of higher learning reviewed used at least one of these indoor modalities to communicate on campus. Digital signage including LCDs, plasma monitors and cable television overrides were cited as part of the emergency notification system on 26 percent of campuses, representing the most widely used indoor modality in the sample. Nineteen percent of the schools used indoor public address systems, most commonly through telephone intercom systems or voice-enabled fire alarm panels. Desktop alerting for computers connected to campus information technology networks was in place at six percent of the schools.

Seventy-seven percent of the colleges and universities in the study indicated the use of outdoor systems to alert people on campus of an imminent threat. The most widely used outdoor modality is blue light/outdoor emergency phones, which are available on 60 percent of the campuses reviewed. Outdoor warning sirens and public address systems are also in use on nearly a quarter of the campuses. A limited number of campuses rely on mobile loudspeakers on security vehicles to communicate emergency information.

Extended modalities go beyond the traditional means of communicating to create an additional touch point for emergency information. Sixteen percent of the campuses use closed-circuit televisions as part of their emergency response plans. In addition, the growing use of social media in today's society has made it another viable alternative for reaching students with critical information. Though still small in comparison to other modalities, Twitter and Facebook are used by 12 percent of the universities to share information.

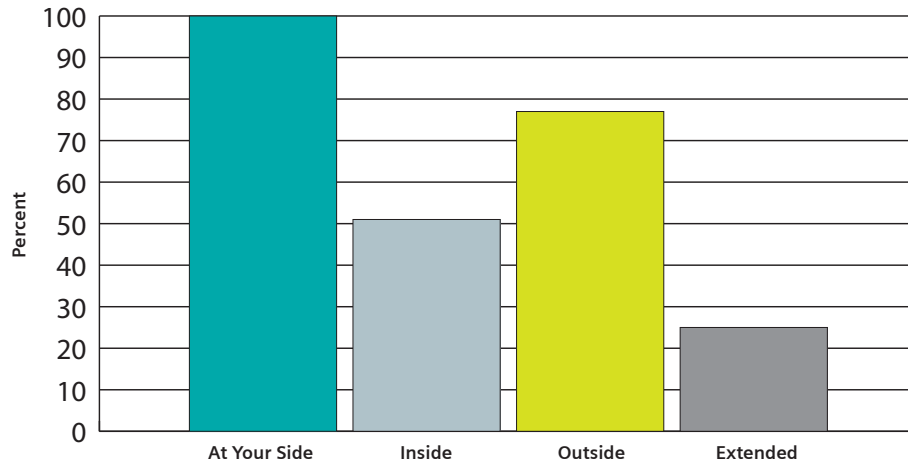
Summary

There is a wide array of options available for colleges and universities to communicate with their communities during an emergency. While each campus reviewed has some way of sharing information, few demonstrate the type of comprehensive, multi-layered system that is critical to reach the masses in times of crisis.

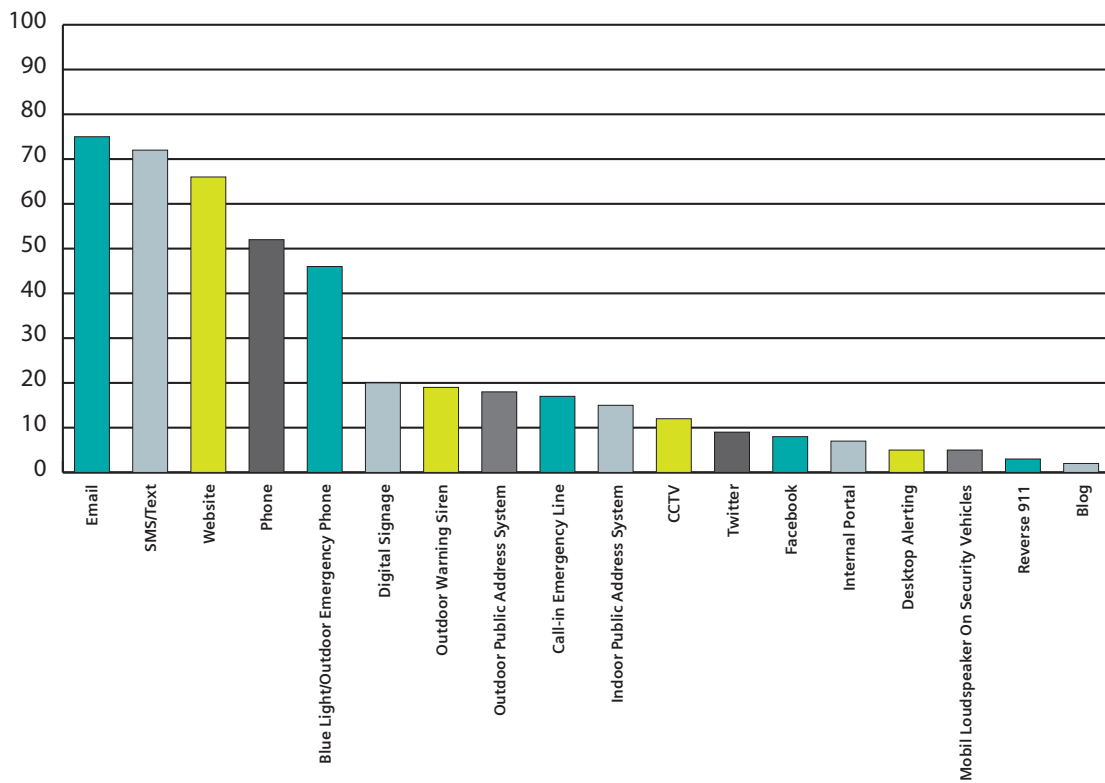
Web-based alerting, including short message service (SMS) texts, mass emails, voicemail blasts, website postings and social media, is the most widespread method for communicating in an emergency on college campuses today. While these are important components of an effective mass notification system, relying on these systems is not a sound practice. Web-based systems work well if devices are turned on and are being monitored, there is no power failure, no wireless network failure and the owner has opted in to the program. But if any of these factors are compromised, the message won't be received.

Depending on a single mode of emergency notification also presents challenges from a building code perspective. For example, the 2010 edition of the National Fire Protection Association (NFPA) 72 code clearly states that a web-based alerting solution is not enough by itself and should be integrated with other audible and visual components. In addition, sections of the Occupational Safety and Health Administrations' Part 1910 standard declare that workplaces (including colleges and universities that receive federal funding) must have emergency action plans and employee alarm systems.

Percentage of Colleges and Universities Using At Least One Modality in Each Venue



Prevalence of Modalities



Underwriters Laboratories (UL) is also planning to add emergency mass notification systems to its list of products for which UL attaches standards for testing and approval, which could pave the way for new innovations in layered mass communications.

An integrated, multi-modal system should include communications vehicles that actively interrupt the community to get their attention as well as more passive tools that can contain detailed instructions. It should also include a combination of visual and audible warnings that can be segmented to reach a particular part of the population based on the type of incident and its impact on specific individuals or groups. If this type of layered, redundant messaging exists on college campuses today, it is not clearly articulated in the vast majority of Clery Reports.

The safety and security of students, administrators, faculty, staff and visitors is of the utmost importance on all college campuses, regardless of type, location or size. Protection from legal liability and the costs associated with an ill-fated event or non-compliance are also critical considerations. By ensuring that the right protocols and technology is in place to communicate with everyone, everywhere, at any time, institutions of higher learning can confidently ensure every member of the campus community has a safe, nurturing, learning environment within which to thrive.

Siemens has created a proprietary tool to help university leaders, campus police and security teams examine their emergency communication systems based on satisfaction, priority and campus coverage. The result is a maturity score aligned with the levels defined in this paper that help a school identify areas for improvement. For more information, please contact Siemens at [insert contact info].

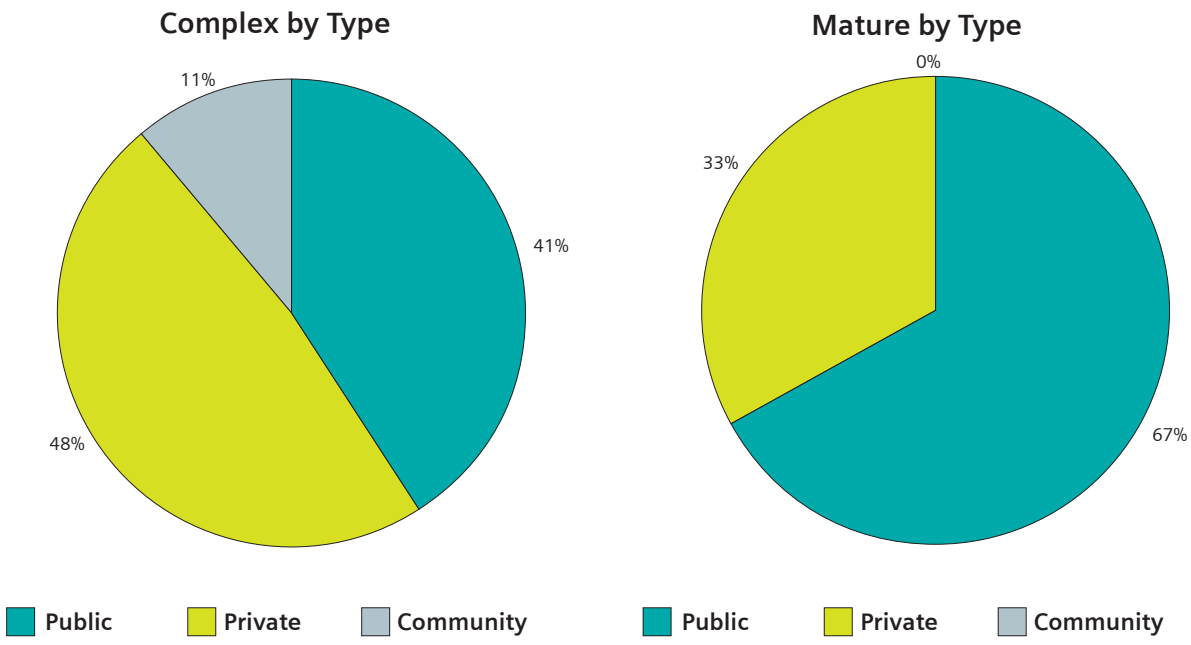
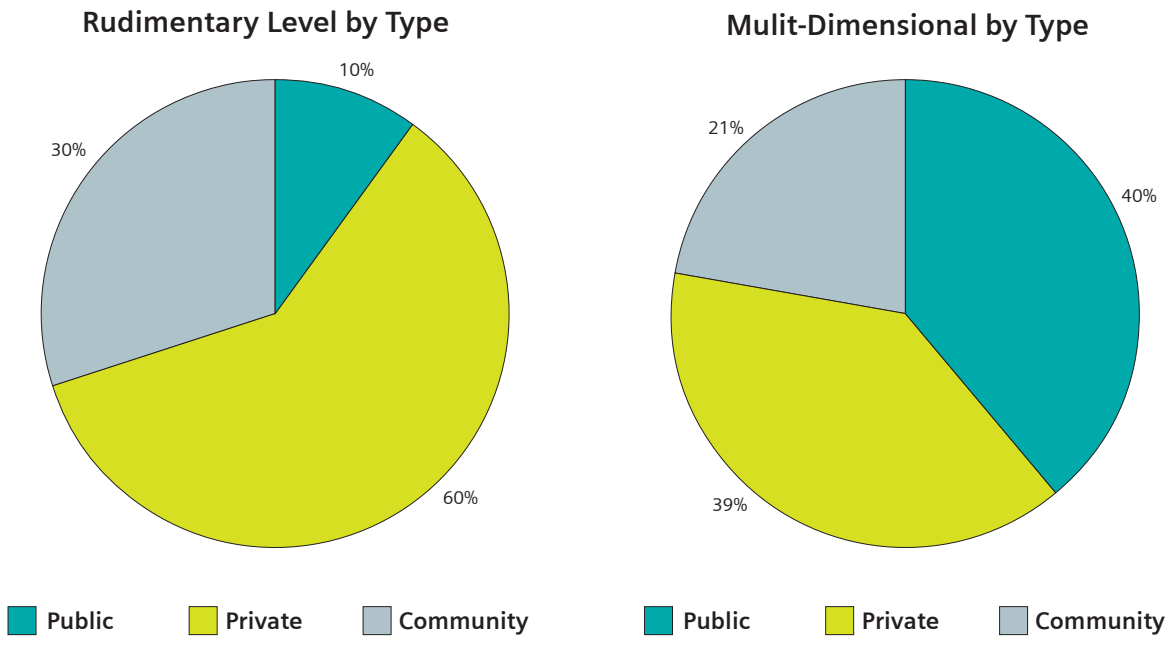
Appendix A

Clery Reports from the following colleges and universities provide the basis for data presented in this report.

American University, Washington, DC
 Arizona State University, Tempe, AZ
 Brigham Young University, Provo, UT
 Brown University, Providence, RI
 Bucks County Community College, Newtown, PA
 Capitol University, Columbus, OH
 Catawba Valley Community College, Hickory, NC
 Central Michigan University, Mount Pleasant, MI
 Champlain College, Burlington, VT
 Citrus College, Glendora, CA
 College of Idaho, Caldwell, ID
 College of Southern Nevada, S. Las Vegas, NV
 Columbia University, New York City, NY
 Cornell University, Ithaca, NY
 Dartmouth College, Hanover, NH
 Elmhurst College, Elmhurst, IL
 Emory University, Atlanta, GA
 Fairmont State University, Fairmont, WV
 Franklin University, Columbus, OH
 Furman University, Greenville, SC
 Gonzaga University, Spokane, WA
 Harvard College, Cambridge, MA
 Hawaii Pacific University, Honolulu, Hawaii
 Iowa State University, Ames, IA
 Ivy Tech Community College, Indianapolis, IN
 Lakes Region Community College, Laconia, NH
 Laramie County Community College, Cheyenne, WY
 Laredo Community College, Laredo, TX
 Lock Haven University, Lock Haven, PA
 Lord Fairfax Community College, Middleton, VA
 Marquette University, Milwaukee, WI
 Mississippi State University, Mississippi State, MS
 Montana State University, Billings, MT
 Moraine Valley Community College, Palos Hills, IL
 New Mexico State University, Las Cruces, NM
 North Dakota State University, Fargo, ND
 North Idaho College, Coeur d'Alene, ID
 Northern Illinois University, DeKalb, IL
 Norwalk Community College, Norwalk, CT
 Nova Southeastern University, Ft. Lauderdale, FL
 Princeton University, Princeton, NJ
 Regis University, Denver, CO
 Rutgers University, New Brunswick, NJ
 Saint Louis University, Saint Louis, MO
 Samford University, Birmingham, AL
 Shenandoah University, Winchester, VA
 Southern Arkansas University, Magnolia, AR
 Southern Utah University, Cedar City, UT
 St. Ambrose University, Davenport, IA
 Stanford University, Stanford, CA
 Texas A&M University, College Station, TX
 Towson University, Towson, MD
 Tulane University, New Orleans, LA
 University at Albany/State University of NY, Albany, NY
 University of Alaska, Anchorage, AK
 University of Delaware, Newark, DE
 University of Florida, Gainesville, FL
 University of Illinois, Champaign, IL
 University of Kansas, Lawrence, KS
 University of Louisville, Louisville, KY
 University of Maine, Augusta, ME
 University of Massachusetts Amherst, Amherst, MA
 University of Minnesota, Minneapolis/St. Paul, MN
 University of Nebraska, Lincoln, NE
 University of New England, Biddeford, ME
 University of Notre Dame, Notre Dame, IN
 University of Oregon, Eugene, OR
 University of Portland, Portland, OR
 University of Puget Sound, Tacoma, WA
 University of Sioux Falls, Sioux Falls, SD
 University of Southern California, Los Angeles, CA
 University of Tulsa, Tulsa, OK
 University of Vermont, Burlington, VT
 University of Wyoming, Laramie, WY
 Vanderbilt University, Nashville, TN
 Virginia Tech, Blacksburg, VA
 Yale University, New Haven, CT

Appendix B

Clery Reports from the following colleges and universities provide the basis for data presented in this report.



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