

healthcare



first responders

MISSION CRITICAL COLLABORATION & NOTIFICATION

DAKS 

SOLUTIONS GUIDE



education



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Solutions With Impact™



DAKS Solutions

Now more than ever, organizations need solid telecommunications. Workforces have never been more mobile and dispersed, and it is an increasing challenge to quickly and reliably communicate with them, especially when a crisis erupts. DAKS is a high-performance, high-availability telecommunications platform that supports deployment of mission critical collaboration and emergency notification solutions. With its flexibility and scalability, DAKS supports the unique communication and collaboration needs of small or large healthcare providers, educational institutions, utilities, government organizations and more.

DAKS can automatically dial subscribers, deliver recorded and/or live voice announcements, confirm contact with and accept acknowledgments from subscribers, connect subscribers for bilateral calls or conferences – all according to an organization's business rules and response strategies. With the flexibility to tailor a solution to fit the enterprise requirements and environment, DAKS provides highly functional and reliable solutions in a wide range of application scenarios.

Healthcare



- Automated call-in of staff in response to disaster or emergency events
- Nurse call mobility
- Code announcements
- Critical resource and asset tracking

Utilities



- Disaster and threat response notification – internal, public safety and regulatory personnel
- Mobilization of repair crews
- Dial-in access to updated status messages

Community



- Severe weather evacuation
- Public notices
- Event cancellations

Government



- Threat response coordination – emergency conferences
- Evacuation scenarios
- Legislative assembly – committee conferencing, voting time alerts

Education



- Dormitory and campus evacuation
- "Snow day" notification
- Departmental and committee conferences

Transportation



- Schedule disruption notifications
- Repair crew mobilization
- Status updates

Manufacturing



- Emergency/hazard response
- Production process fault notification
- Maintenance and repair crew notification
- Plant operations staff emergency conferences
- Personal Security monitoring of personnel deployed in hazardous roles

Hospitality



- Event announcements
- Fire and evacuation
- Elevator alarm

Enterprise & General



- Building management and maintenance
- Panic button
- Security breaches
- Virus-safe IT notification

This DAKS Advanced Communication Solutions Guide will introduce you to some of the many applications that will improve your organization's day-to-day communications, while also serving as the cornerstone to your disaster preparedness strategies.

Platform Differentiators

DAKS is a vital communications link that will:

- Improve mobility and enhance productivity of your staff
- Improve safety and security of staff, patients, visitors, buildings and equipment
- Mitigate crisis events and their impact
- Effectively communicate with internal staff and outside agencies
- Dispatch resources to address errors and failures of equipment, facilities and systems

The DAKS solution differentiates itself from other solution approaches in a number of important aspects.

Platform for Extensible, Tailored Solutions

DAKS intelligently extends the use and value of your existing communications infrastructure via a wide range of complementary application modules that may be deployed individually or in combination. The single platform offers common resource administration to support simple or comprehensive incident response strategies. The core application modules include:

- **Alert Notification** – Voice and text messages with optional recipient acknowledgement
- **Conferences** – Meet-me, preset and progressive conferences that can be scheduled or ad hoc, along with emergency conferences to dial out to response team members for immediate collaboration
- **Announcement Services (Info Telephone)** – Multi-channel dial-in announcement services for up-to-date status information messages
- **Personal & Group Calling Services** – One-number dialing for enhanced accessibility to mobile individuals and team members
- **Positioning Services** – Quickly locate people and mobile assets

Platform for Mission Critical Solutions

DAKS Communications Server is engineered for:

- Reliability with no moving parts, no magnetic storage and high MTBF
- Availability
 - Powered from AC and/or DC sources
 - Operationally independent of Admin PC
 - Robust real-time operating system
 - Hot standby configurable



Platform for Tightly Integrated Solutions

DAKS is the basis for tightly integrated enterprise communication solutions that leverage your organization's existing infrastructure in two key areas:

- **Integration within the Enterprise Voice Network.** DAKS is deployed as a node in the voice network by connecting directly to an enterprise PBX, leveraging one of several protocols:
 - TDM PRI interfaces (T1/E1)
 - NI2, QSIG
 - CorNet®-NQ for Unify OpenScape 4000/HiPath 4000
 - VoIP SIP and SIP-Q (Gbit Ethernet)
 - Multi-Level Precedence and Preemption (CorNet-NQ, EWSD DSS1)

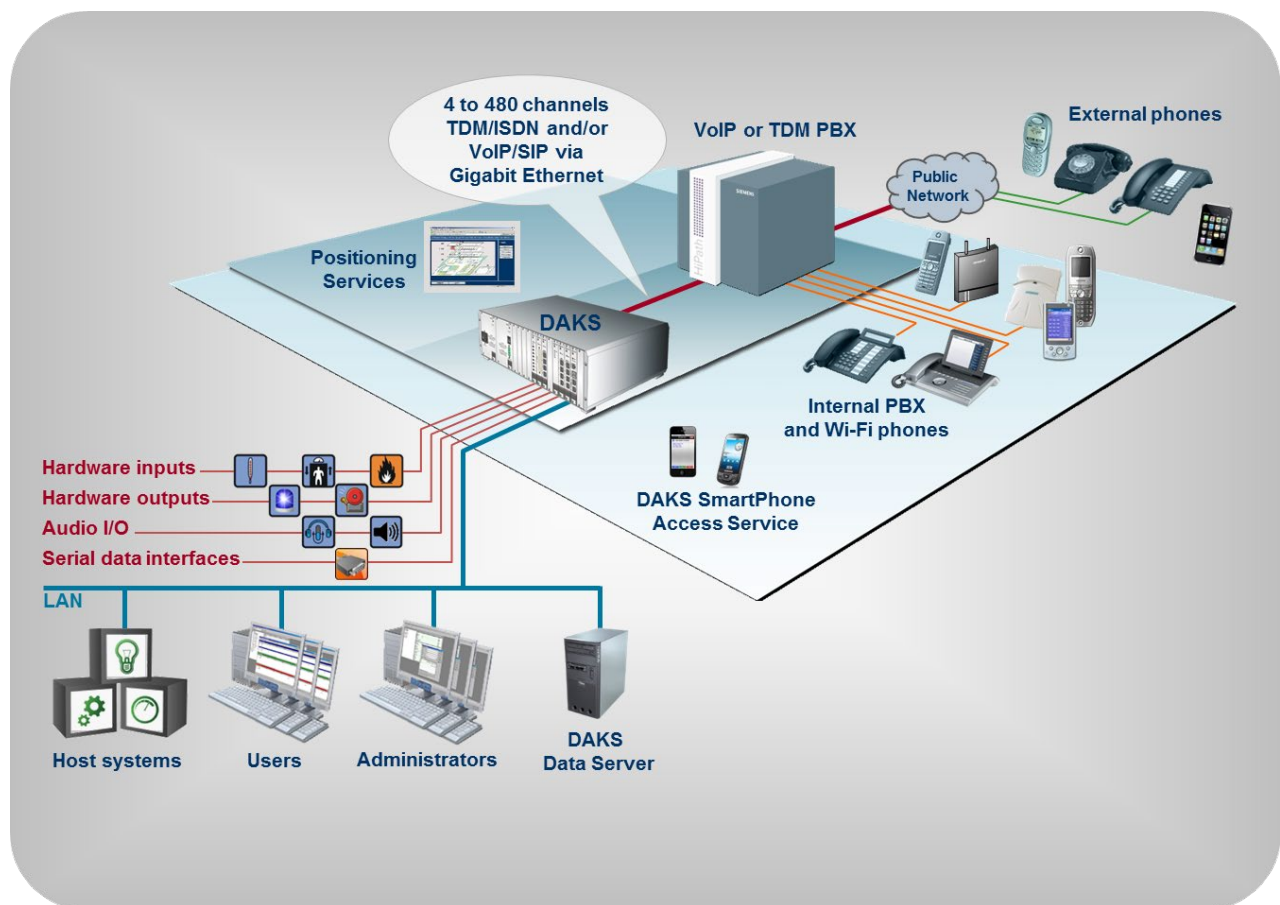
DAKS can place calls through the PBX to any internal or external phone. Users may access DAKS directly via abbreviated dialing or speed dial buttons. DAKS also interfaces directly to other telecom network applications to simplify high volume call activity. Examples include:

- Attendant Consoles
- Dispatch & Trading Turrets
- Enterprise CTI Applications

Operators can quickly and easily press a touch screen button on a turret and immediately launch a broadcast or convene a conference call.

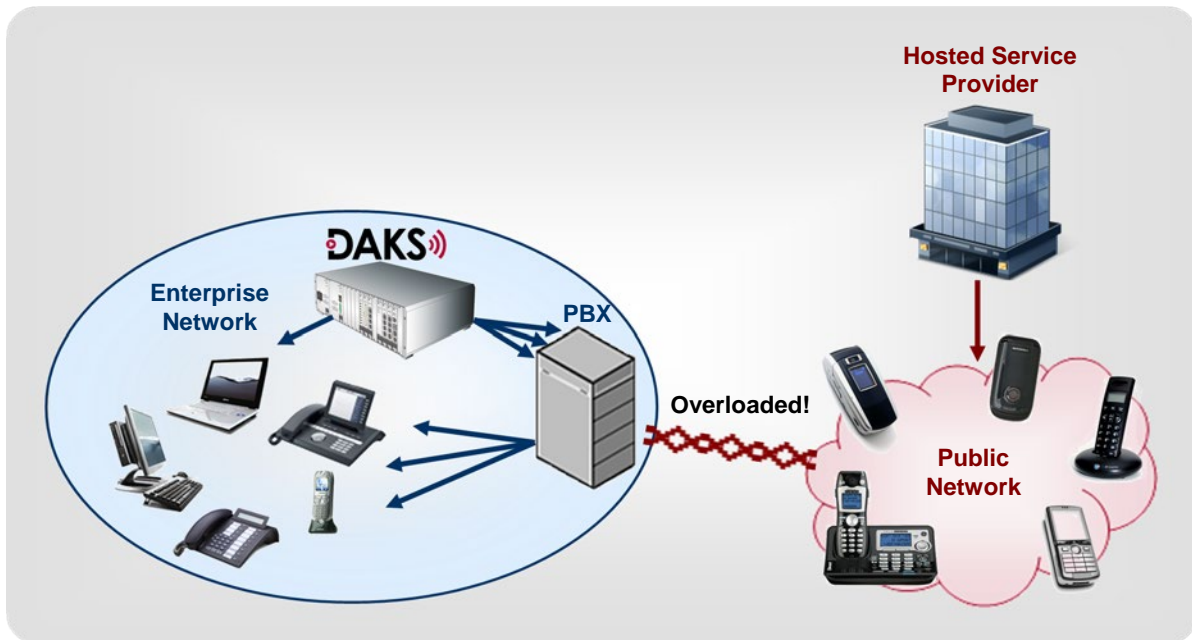


- **Integration with Enterprise Applications and Operational Infrastructure.** DAKS expands beyond the traditional telecom network and interfaces with a variety of third party systems via a wide range of interfaces and protocols.
 - Electrical Interfaces to integrate with Physical Plant and Facilities
 - Host Interfaces to integrate with Control and Operations Support systems or Nurse Call systems
 - ESPA-X: XML-based alarm server interface
 - TR500: UDP-based LAN interface with XML protocol
 - xLink-100: TCP-based LAN interface with XML protocol
 - Serial Interfaces to Nurse Call systems and Patient Monitoring systems
 - RS232/RS422 with TAP industry standard protocols
 - LDAP interface for subscriber database import
 - Messaging Interfaces to Mobile devices
 - OAP to Ascom Wi-Fi devices
 - DSAS to iPhone, BlackBerry and Android devices



Certainty of Communication

By implementing DAKS on-premise, you leverage your own voice network infrastructure, offering integrated, high quality services and full control of costs and security. DAKS sits behind the corporate firewall, mitigating the security risks associated with hosted services. More importantly, you are assured that you can communicate with your local staff since you're not dependent on availability of limited public network access facilities. Those PSTN resources are, in turn, available for other critical inbound and outbound communications. DAKS lets you make best use of all your communication resources.



Unify Enhanced Features

Via SIP-Q or CorNet-NQ D-channel protocols, DAKS provides enhanced features for Unify OpenScape Voice, HiPath/OpenScape 4000 and HiPath 3000 platforms:

- programming a telephone to ring in an alerting tone (emergency call) to draw attention to the importance of a call (if supported by the endpoint device)
- for busy phones: override or emergency override with neutral announcement, forced disconnect or call waiting
- for busy connection paths: automatic release or emergency override with neutral announcement
- ignoring call forwarding or diversion, e.g. to prevent voicemail activation
- ignoring call pickup groups
- direct access to the executive in an executive/secretary configuration
- automatic speaker activation without lifting the handset
- penetrate do-not-disturb
- with digital system telephones:
 - multi-line alphanumeric display outputs (with 2-line display and browsing option)
 - dialogs with user prompting on the telephone display
 - support for the keypad function
 - connection optimization (Path Replacement)
 - callback if free or busy (Call Completion)

UNIFY[®]

Safety & Security

As tragic as it may be, your organization must be prepared for the unthinkable. If a safety or security incident occurred within your enterprise, is your communications infrastructure ready? Will it:

- Be fully leveraged to protect the safety and security of your staff and visitors?
- Provide easy, ready means for a person to communicate a threat?
- Use latest communication technology to contain the incident and return the organization to the normal operating state in a timely manner?

DAKS assures that you are prepared to respond to safety and security threats. You can:

- Make every phone an emergency reporting portal
- Coordinate first responders and alert constituents of unsafe situations as they develop
- Monitor workers in hazardous environments

Communication is the single most important component in how an organization responds to a crisis. Real time collaboration among incident response personnel is a critical first step to an intelligent and swift response.

With the click of a mouse, the push of a button or a telephone call from the site of an incident, DAKS instantly dials out to first responders, decision makers and response coordinators, putting them into a conference call. This crucial step assures the next steps are the right steps to contain the crisis and control panic. DAKS can then begin alerting endangered parties to emergency situations and provide critical, well-considered instructions. And, DAKS offers status updates – both as on-demand dial-up announcements and via additional outbound calls or e-mails.

An organization's planning and preparedness determines its ability to respond, directly affecting the impact a crisis will have. Unique aspects of each crisis require a unique response. This section presents the following safety and security scenarios and describes how DAKS can drive the efficacy of the response:

- Crisis Response
- Silent Alarm
- Emergency Telephones
- Panic Button
- Evacuation Alert
- Hazardous Worker Monitor
- Code Adam



Crisis Response

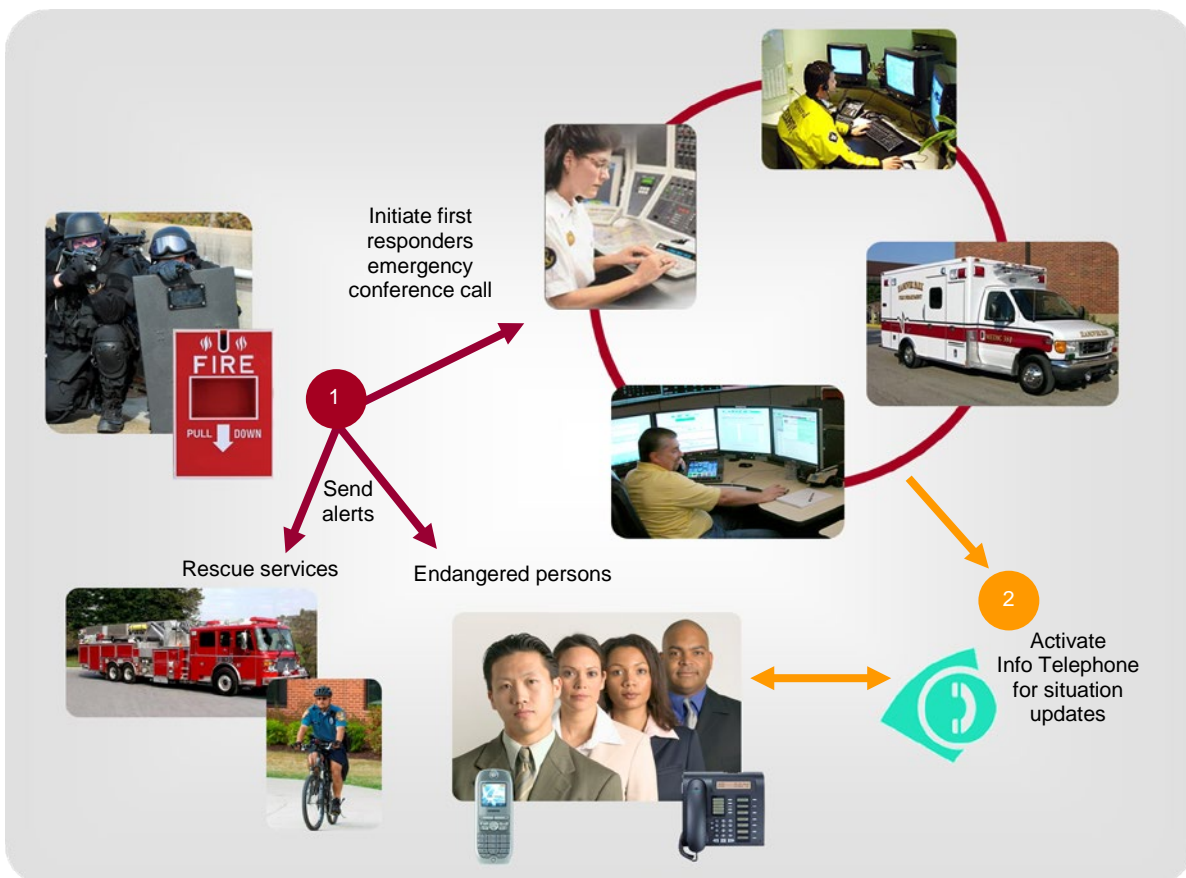
The severity, location, magnitude and visibility of a crisis are unique to each event. To contain the incident and ultimately return the organization to a normal operating state requires crisis management to be adaptable and ready to work in an ad hoc fashion. The first step in many cases is activation of Emergency Conferences among crisis response personnel to coordinate activities, determine the messaging and issue notifications to affected parties.

Complement collaboration with broadcasting notice of the critical incident (fire alarm, hazmat alert, weather alert, security threats, etc.) to first responders and endangered parties via Alert Notification with prerecorded and/or ad hoc voice and text messages. Assuring the receipt of the information by the highest percentage possible is critical. By utilizing the Unify enhanced features, DAKS goes beyond simple dial out to phones by:

- interrupting active calls on busy phones
- ringing phones even if they've been set to Do-Not-Disturb or forwarded to voicemail
- being differentiated by an urgent ring tone
- automatically activating speaker phones without requiring anyone answer the phone



Contact key decision makers using Calling Services one-number Personal Call Profiles to programmatically dial out to multiple phone numbers (e.g. office, mobile, home, global follow-me). Calls into the command center can be managed by Calling Services Group Call Profiles with optional situation announcements preceding connection to a response team member.



Situation Updates posted by crisis response team can be accessed via Info Telephone dial-in announcement service. Callers get information without burdening response or operations staff. Differentiated information can be provided to external callers and internal (system phone) callers.

Scenario Tables allow multiple processes to be activated simultaneously. For example, activating a single scenario could simultaneously:

- setup an Emergency Conference among crisis management team members
- initiate an Alert Notification to first responders
- activate an Info Telephone announcement profile indicating critical situation status

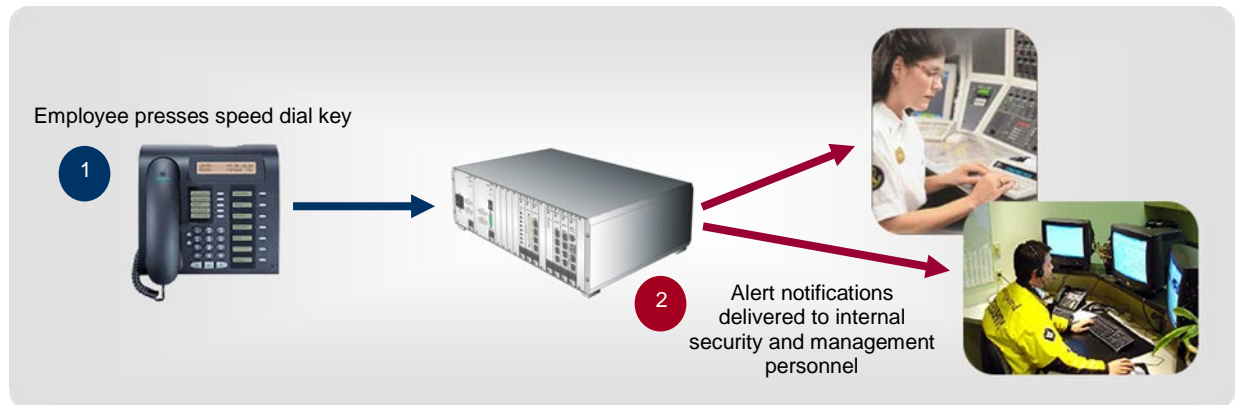
Silent Alarm

In the event someone makes a verbal or physical threat to one of your employees, a silent alarm provides a mechanism to alert security of a potential problem without bells and alarms sounding to make a situation more dangerous. This is an ideal solution for receptionists, emergency rooms, pharmacies and other locations where employees interact with the public. It is also perfect for scenarios involving counselors, doctors and staff that meet in private with employees, students or visitors who might become threatening. Alternatively, the silent alarm can be deployed enterprise-wide so every phone becomes an emergency reporting portal.

DAKS connects to various types of devices for the silent alarm notification, via:

- Distress button modules hardwired to DAKS through the Contact I/O module
- "Virtual" panic buttons realized by speed dial keys on fixed system phones
- Interfaces (APIs) to physical security management systems controlling distress button modules

A preconfigured key on any system phone triggers an Alert Notification to the security office. The caller's line is dropped immediately so there is no persistent visible (no lamps are lit) or audible (no dial tone is heard) indication on the phone. The broadcast alerts security office personnel, and the source (location/ID) of the distress call is shown on their system telephone displays. To assure the local security office provides the appropriate level of priority to the call, leverage the Unify enhanced features.



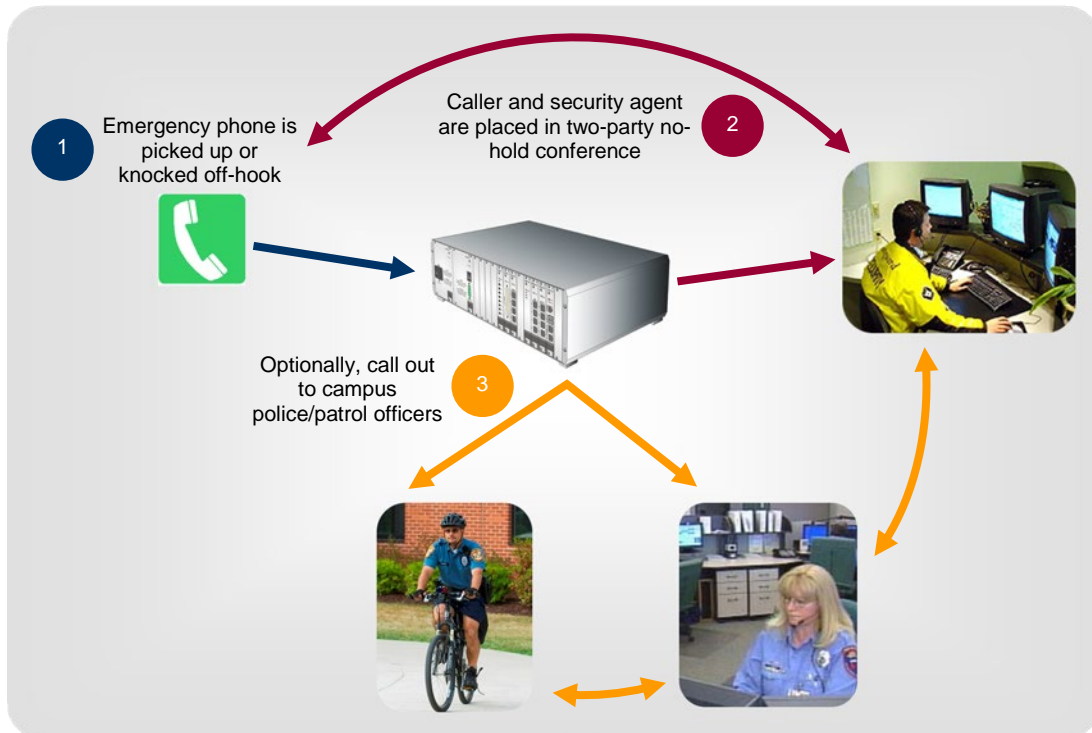
With the DAKS Performance Package, destination of the alerts can be controlled based on security agents logging in/out of the application and/or by work shift schedule.

In addition to local security personnel, the alert can be simultaneously delivered to executive management, operations management and support staff who may be affected or in the vicinity of the threat.

Emergency Telephones

Emergency telephones deployed throughout a campus are used when someone feels they are in danger or to report an emergency. The phones are configured to ring down to initiate a no-hold Emergency Conference between the caller and a local security agent. The security agent sees the location/ID of the emergency phone on his system telephone display and hears a short recorded announcement of the location of the caller. The local security agent can extend the conference to 911 municipal services and/or additional local responders without putting the caller on hold or injecting tones.

Additionally, the conference can be configured to automatically call out to patrol officers carrying mobile phones who are on-duty and/or logged-in using functionality provided by the Performance Package.



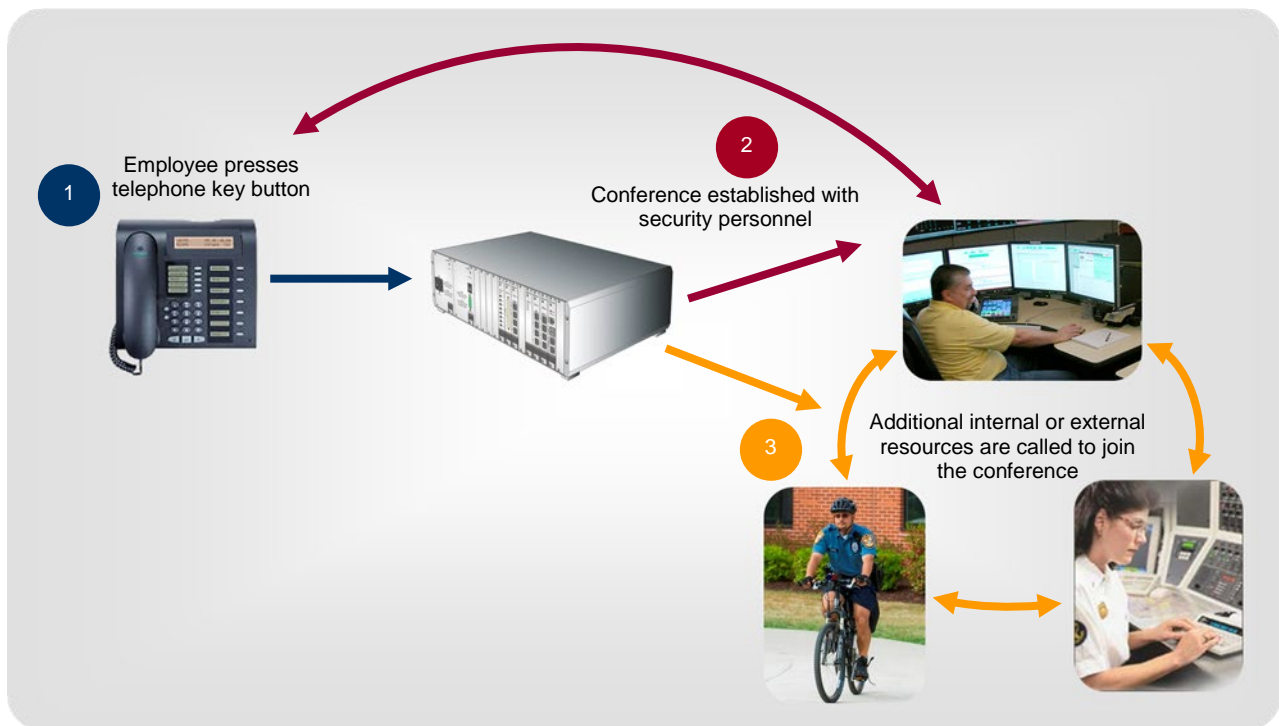
Panic Button

A Panic Button provides a mechanism to alert security of a potential problem and also allow them to hear what is happening at the location. This scenario goes beyond the Silent Alarm discussed previously by establishing a conference call with the security officer. Based on the sounds from the site, the security personnel will be able to glean additional insight into the situation and dispatch appropriate resources to the location.

Pressing a panic button (realized by speed dial key on fixed system phone) triggers a conference call to the security office. The conference starts with the source (location/ID) of the distress call shown on the system telephone displays and the security office personnel phone muted. The Unify enhanced features provide additional priority for the inbound call with urgent ring tone and ability to preempt active calls.



The notification can also be directed to patrol officers carrying mobile phones, administrators who need to be made aware of panic button events, and/or management and support staff who may be in the vicinity of the threat. Additionally, the conference can be configured to automatically call out to patrol officers carrying mobile phones who are on-duty and/or logged-in using the Performance Package advanced feature set.



In addition to local security personnel, the alert can be simultaneously delivered to executive management, operations management and support staff who may be affected or in the vicinity of the threat.

Associated alarming devices (sirens, beacons, etc.) can be activated via hardwired connection to the DAKS Contact I/O module or API events monitored by alarm management and control systems.

Evacuation Alert

Evacuation alerts are required for a variety of circumstances – fire, weather, hazardous material spills and more. Timely delivery of a message with accurate instructions is key to protecting the wellbeing of staff and visitors to the area.

Alert Notification groups are defined for appropriate areas of concern (e.g. buildings, floors, halls, etc.) within the enterprise campus. The groups and members are configured to utilize Unify enhanced features to allow the evacuation announcement call to:

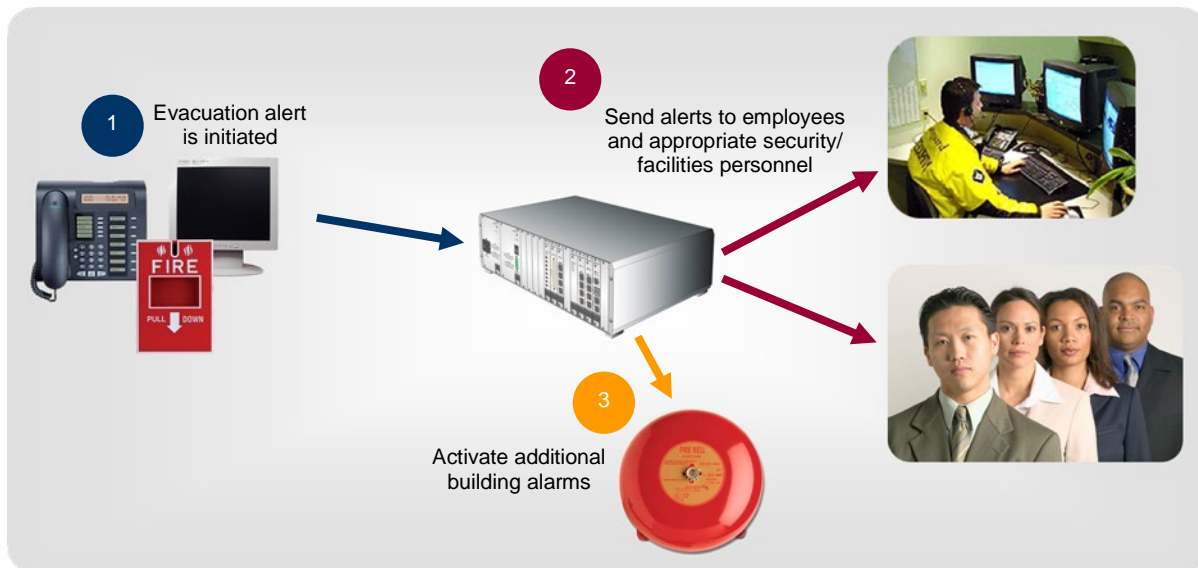
- interrupt active calls on busy phones
- ring to phones even if they've been set to Do-Not-Disturb or forwarded to voicemail
- be differentiated by an urgent ring tone
- be played to speaker phones without requiring anyone answer the phone

Evacuation alerts can be triggered by/from:

- dial-in from any telephone with PIN authentication
- the DAKS Operator console with the option of using the DAKS Custom Operator tool to design a display with customized campus map
- hardwired connection from alarm panels to DAKS Contact I/O module
- interface to an alarm management and control system via API



Scenario Tables allow multiple alerts to be activated in a single transaction. Outputs from the DAKS Contact I/O module and/or host system APIs can be used to activate building alarms via hardwire connection to panels or events monitored by alarm management and control systems.

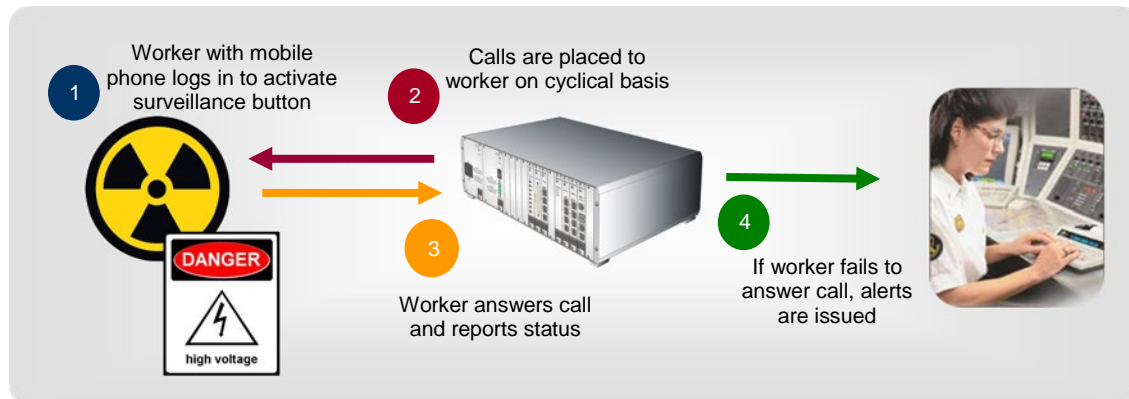


Hazardous Worker Monitoring

DAKS supports proactively monitoring the safety and security of workers in potentially dangerous work environments. A worker beginning a hazardous work assignment (e.g. security patrol, rescue team member, psychiatric ward attendant, etc.) registers with DAKS Personal Security application or a supervisor activates monitoring for a selected staff member.

DAKS dials cyclical calls to the worker at regular, specified intervals (e.g. every 30 minutes.) At the monitoring team's discretion, the worker may be asked to:

- simply answer the call and disconnect after listening to a short announcement
- answer the call and acknowledge with a "*" key press
- answer the call and provide a current status/location update when prompted



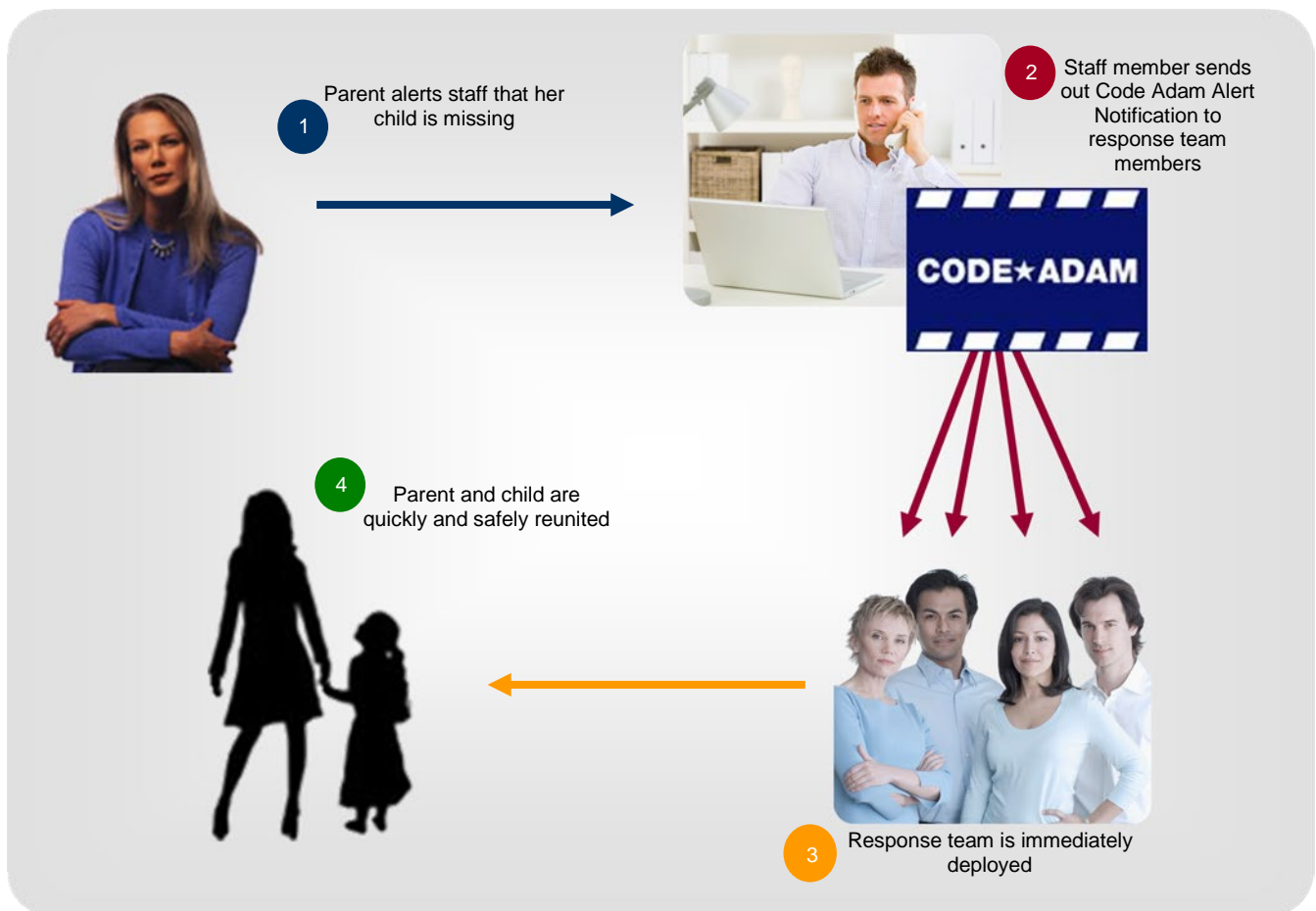
Workers running ahead of schedule can dial-in to reset the calling interval. When a worker has completed her/his assignment, she/he can dial-in to deactivate monitoring.

If a monitored worker fails to answer the call, DAKS issues an Alert Notification to specified monitoring personnel including, when indicated, the last status/location update provided by the monitored worker. When deployed with DAKS Positioning Services, workers equipped with Ascom Wi-Fi phones will have their "area of interest" (location) also reported as part of the alert message.

Code Adam

When a person goes missing in a public building (such as a shopping mall, hospital or government building), immediate action is necessary. With a proper plan in place and a reliable alert system, a missing person is more likely to be found safe. The DAKS Alert Notification application is the efficient solution when it comes to alert systems.

By dialing one number, an employee can simultaneously notify Code Adam response team members of the situation, dramatically increasing response times. A potentially hectic situation can be solved with ease and little anxiety. The diagram below shows an example of a Code Adam alert and how DAKS aids responders.



Operations & Facilities

In today's economic times, companies are searching for any advantage they can uncover. Even small incremental improvements or cost savings are headline news. Gaining efficiencies throughout the enterprise to drive lower operating costs can be the difference between survival, cutbacks or even closing the doors.

For operations and facilities departments, the message is clear:

- Do more with less
- Reduce costs
- Leverage existing systems and networks
- Automate manual processes
- Reduce resource requirements

DAKS streamlines day-to-day operations and improves the productivity and effectiveness of your staff. From offering "hard dollar" savings through premise-based conferencing to improving the accessibility of key staff members, DAKS will make an immediate impact in your organization.



This section presents the following operations and facilities scenarios and describes how DAKS will have a direct impact on your routine operations:

- Hotline Assistance
- Key Resource Contact
- IT Virus Notification
- System Failures: Monitor, Alert & Dispatch
- Critical Resource & Asset Tracking
- Audio Conference Bridge

Hotline Assistance

The goal of Hotline Assistance is to quickly and efficiently connect a caller needing assistance with the appropriate corporate resource. Examples include:

- After hours customer support
- IT help desk
- On-call maintenance engineers
- Security personnel



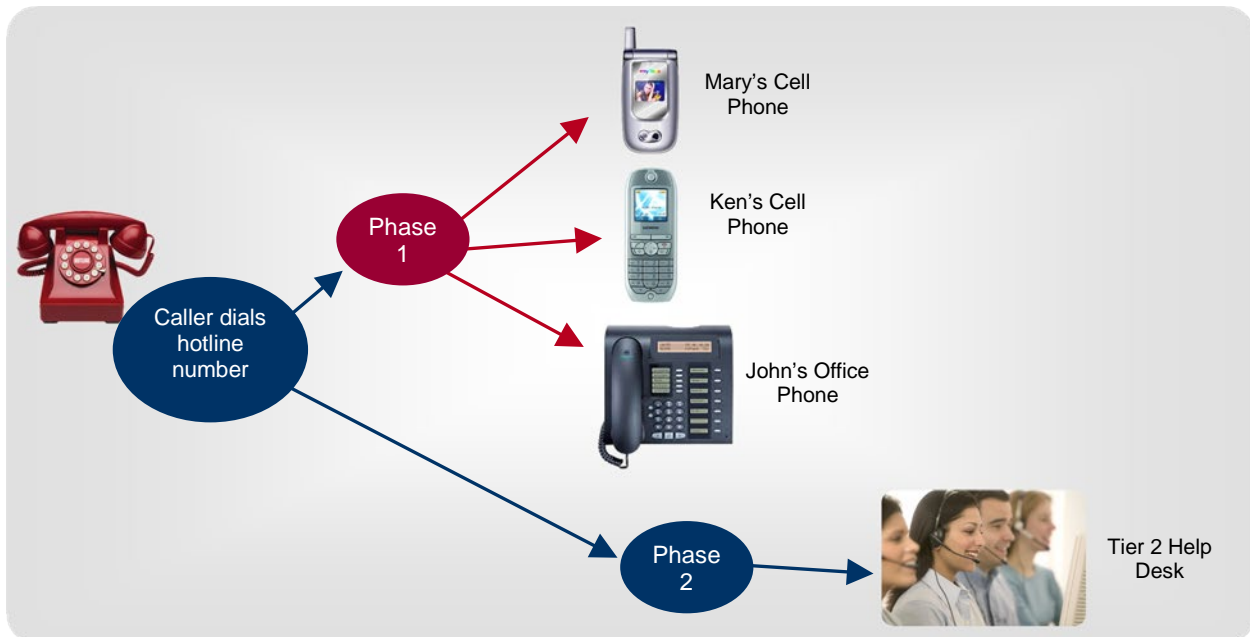
DAKS provides hotline access to internal service and support teams, improving their accessibility and responsiveness. DAKS Calling Services provides a two-phase contact mechanism to put the caller in touch with someone who can help resolve a problem.

- Caller dials a single number for assistance.
- DAKS places parallel calls out to members of the support team (Group Calling Services). In this first phase of dialing, the calls are made to the team members' primary office or mobile phone numbers.
- The first team member to answer is directly connected to the caller. To assure that a call is not accidentally switched through to an answering machine or to an inappropriate contact, the member may optionally enter an 'accept call' code before the caller is connected. Others who may answer during the last ring are given an informational message telling them that another team member has already responded.
- If no team members are contacted in the first phase, the second phase of call out might be directed to a back-up team, additional phone numbers for the primary team, and/or to a tier 2 level support or company operator who could arrange for support personnel to contact the calling party.

With the Performance Package:

- Support team members can control their availability by logging in/out
- Calls can be directed to team members based on day of week and time of day (work shift)

When a support team member, or even the hotline caller, needs to reach a particular individual, Personal Call Profiles can be used to improve individual's accessibility. Refer to Key Resource Contact scenario.

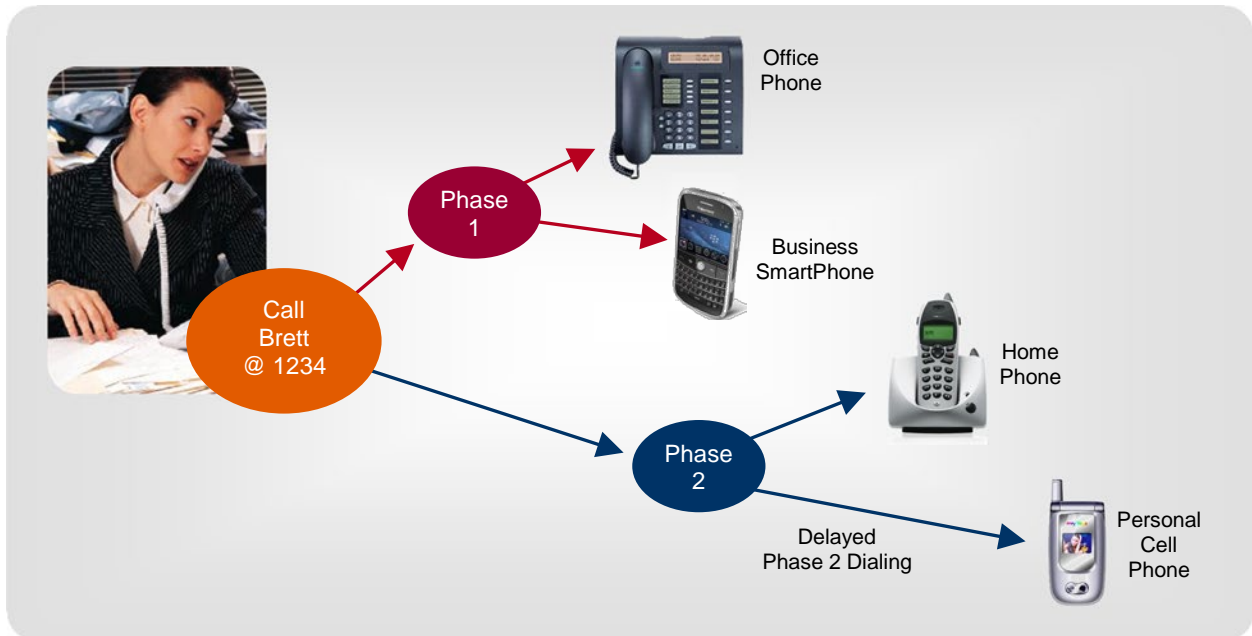


Key Resource Contact

Within all organizations, key resources – executives, security directors, doctors – must be accessible at almost all times. To facilitate, these resources have many contact numbers – desk phones, Wi-Fi phones, smartphones, pagers, etc.

DAKS Personal Calling Services accelerates and simplifies the accessibility of persons by using intelligent dialing of various target numbers. These targets can be called either simultaneously or sequentially, with one or more target number(s) dialed after the other. With the DAKS Performance Package, delivery of the calls are controlled based on resources logging in/out of the application and/or by time of day and day of week.

For example, in the graphic below, the caller dials extension 1234 to reach Brett. DAKS initially attempts to dial Brett's office extension and cell phone. If Brett is not reached after a defined time, DAKS is configured to continue to dial the original numbers and then also begin to call home number and personal cell phone. As an alternative, DAKS could cease calling the phase 1 numbers and only dial out to the phase 2 numbers after a given time. When Brett answers the call on one device, all other connections are released by DAKS.



If needed, called persons can receive a notification announcement before switching the call through, e.g. "You have a personal call." DAKS can also request confirmation from called persons by entry of a call acceptance code, e.g. to prevent answering machines or family members answering a call.

Call Screening is available to define authorized numbers that are entitled to activate the Call Profile. Non-authorized subscribers reach a busy signal, are played an announcement, or are forwarded to another target, e.g. to the assistant's office.

IT Virus Notification

In the case of a computer virus, enterprise e-mail may not be available. Even if e-mail is available, using it could risk spreading the virus. An Alert Notification is sent out to phone contacts only or to both phones and e-mail addresses, informing network users / PC users of the virus threat or situation. An "on the fly" announcement message can be recorded via the phone to provide exact instructions on how to address the situation. Or, the user may use the DAKS text-to-speech module to create an ad hoc message with instructions.



The screenshot shows a Windows-style dialog box titled "Generate WAV file through speech synthesis". The dialog has a blue title bar with a close button (X) in the top right corner. It is divided into several sections:

- Identification:** A text field labeled "Announcement:" containing the text "Ad-hoc speech synthesis". To the right of this field are "OK" and "Close" buttons.
- Text to generate:** A text area containing the message: "Attention: There is a new virus propagating via e-mail messages. Do not open any attachments that arrived after 10 AM today, regardless if you know the sender, until further notice." Below the text area is a checked checkbox labeled "Adopt text to 'text message' too".
- Play back:** A section with a "Language:" dropdown menu set to "English (USA) female". Below the dropdown is a horizontal slider bar. At the bottom of this section are "Play" and "Stop" buttons.
- Transmission to DAKS server:** An empty text field.

At the bottom of the dialog, there is a button labeled "Start play-back of announcement...".

System Failures: Monitor, Alert & Dispatch

With a focus on operations continuity, DAKS can notify the appropriate resources within an organization when a monitored situation crosses a threshold. DAKS can send voice and e-mail messages without human intervention by leveraging the flexibility of the DAKS interfaces.

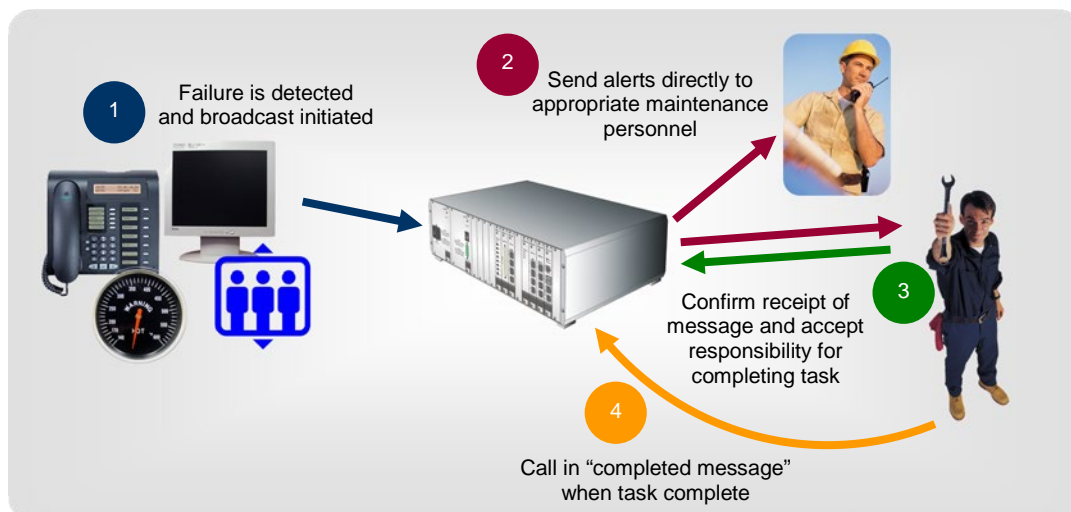
Alert Notifications provide notification of minor situations (e.g. lab refrigeration, temperature gauges, elevator alarms, etc.) to the appropriate personnel. These Alert Notifications can be kicked off using Contact Inputs/Outputs, DAKS Integration Services Manager (ISM) or manually.

If a computer room suddenly becomes too hot, an alarm from a facilities management system can automatically initiate an Alert Notification via ISM to notify a maintenance engineer or centralized Network Operations Center. Or, if a refrigerator with vaccines or other medications suddenly fails, DAKS can notify maintenance before there is a significant loss. Alert Notifications can ask for positive or negative responses to signal acceptance of a trouble ticket. Further, a two-step procedure is available. After a member of the Alert Notification group confirms receipt of the message, the user will also confirm that he will tend to the situation. After the malfunction has been fixed, the user will call DAKS and explicitly confirm with a "completed message" that the problem has been successfully resolved.



Or, if a fire alarm goes off, the Contact I/O module initiates an Alert Notification to start evacuation of a building and potentially another broadcast to notify key personnel of the situation.

Notification of access alarms for doors and windows. Alert Notifications can be kicked off using Contact Inputs/Outputs.



Critical Resource & Asset Tracking

Monitoring assets to prevent inventory loss. Improving efficiency by quickly locating an asset. Locating a person in need of assistance. These are only a few of the drivers for critical resource and asset tracking. DAKS Positioning Services, with the optional enhancement of adding Ekahau solutions, support:

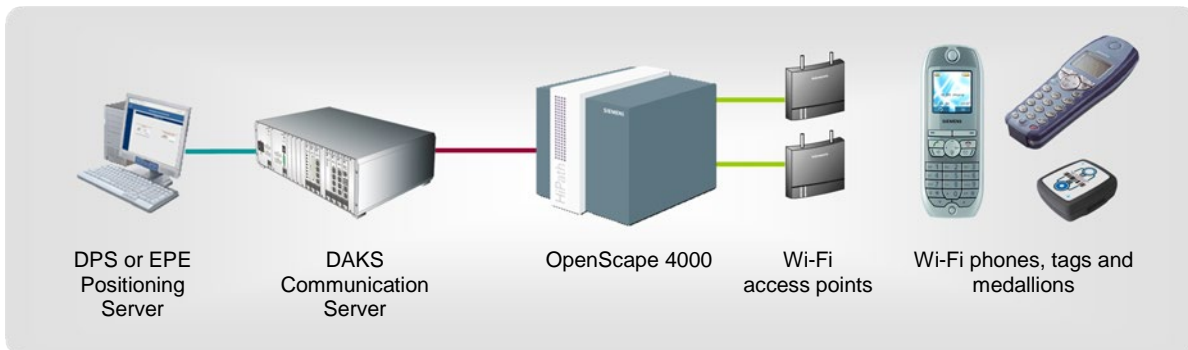
- locating people wearing Wi-Fi medallions
- locating staff carrying Wi-Fi phones (e.g. Ascom i62)
- locating mobile assets with Wi-Fi tags (e.g. such as medical equipment)
- alerting service technicians in the vicinity of a problem
- alerting security when tracked assets are moved outside authorized zones

DAKS DPS-Basic Location Tool reports the location of a person carrying an Ascom Wi-Fi device or an asset with a Wi-Fi tag. The location is based on proximity to HiPath Wireless Access Points – Areas of Interest. For instance, a dispatcher could dial a phone number to access DAKS, be prompted to enter the phone number of the person he is trying to reach and hear a response such as "The person you are attempting to locate is in the west lobby."

When an Alert Notification or Emergency Conference is initiated by a Wi-Fi phone, DAKS determines the location of the wireless phone initiating the broadcast or conference, and:

- location of initiator is shown on phone text displays of notification recipients and conference members
- alert notification announcements and conference introduction announcements are augmented with initiator location

Sample message is: "The strongest received base stations are: Base station on 1st floor, window front east, received with a very strong signal, Base station on 1st floor, in front of LAN distribution box, received with a medium signal." If a nurse is attacked or an elderly person falls, the alerted staff can be quickly dispatched to the proper location.



The DAKS DPS-View provides a graphic browser-based rendition of the positioning results with three level drill-down customized maps and/or floor plans. This allows a centralized security staff or caregiver staff to quickly see the location of requested resources and assets.

Complementing DAKS with Ekahau Positioning Engine (EPE) and Ekahau tags brings enhanced, real-time location tracking capabilities. EPE provides floor-, room- and door-level accuracy. Also, integration with Ekahau creates proactive tracking as the tags can report in at timed intervals, when an object moves or stops moving, in response to button press or when triggered by tamper sensor or pull switch. The EPE can then send alerts to DAKS to notify appropriate personnel that tracked assets are leaving the authorized area.

Audio Conference Bridge

Teleconferencing improves communication, enhances collaboration and controls costs across the enterprise. It leverages the simplest and most common communication device – the telephone. The benefits are well established; teleconferences:

- improve productivity and reduce costs through reduced travel time and more efficient communication
- allow faster decision-making and quicker access to additional personnel resources
- allow rapid follow-up meetings to put plans into action
- improve both the quality and frequency of collaboration among geographically dispersed team members
- can increase profits through market communication opportunities, improved communication with sales people, and a better trained and motivated sales force

DAKS provides a highly flexible and extremely reliable platform for convening conferences. DAKS conferences can be:

- activated and controlled by any on-net or off-net telephone, or through a central DAKS Operator console
- convened immediately or at pre-scheduled date and time
- any combination of dial-out and dial-in participation
- with or without access protection via individual PIN identification for conference members
- denoted as “high priority” to assure conference resources are available

During an active conference, a meeting host can:

- monitor the state of the conference via the DAKS Operator console
- connect additional conferees via operator console or phone keypad
- disconnect active conferees
- grant and withdraw speaking privileges or place conferees into a “park” position
- extend and/or terminate the conference

DAKS leverages the internal network so you avoid usage charges of hosted conferencing solutions. Use DAKS Conferences application to facilitate collaboration and communications for routine operations, such as:

- recurring departmental conferences
- sales calls with potential clients
- ad hoc meetings with partners or customers



Healthcare & Continuing Care

Healthcare organizations are challenged every day to provide high quality care. Delivering high quality healthcare is a multi-faceted goal encompassing factors such as:

- maintaining adequate staffing levels
- managing an array of equipment, facilities and systems
- effectively communicating with internal staff and outside agencies
- containing costs
- providing safe and secure working environments

On top of standard daily operations, hospitals and other healthcare service provider organizations are mandated to have disaster preparedness plans in place to respond rapidly and effectively in crisis situations. Natural disasters and other mass casualty incidents present sudden demands on services. Proper preparation and planning will determine the success of your response. Enabling and executing a 24x7 solution to respond to routine business operations and times of crises demands a continual focus on process improvement, active commitment from all departments and a reliable, powerful and flexible communication system.



DAKS streamlines day-to-day operations while ensuring you are prepared to respond to crisis situations. Whether it's something as routine as automating callbacks to fill shift shortages, or something as dramatic as responding to an influx of patients due to a mass casualty event, DAKS is the vital communications link that ensures your organization responds quickly and correctly. DAKS will:

- improve mobility and enhance productivity of your nursing staff in responding to patients' request for assistance
- provide automated alerting via integration to nurse call, patient monitoring and other vital systems
- improve staff availability and utilization
- improve safety and security of staff, patients, visitors, buildings and equipment
- mitigate crisis events and their impact

This section presents the role DAKS plays in the following healthcare and continuing care scenarios:

- Nurse Call Mobility
- Patient Monitoring Mobility
- Code Announcements
- Off-Hook Alert
- Staff Callback
- Door-2-Balloon
- Regulatory Compliance (e.g. TJC)

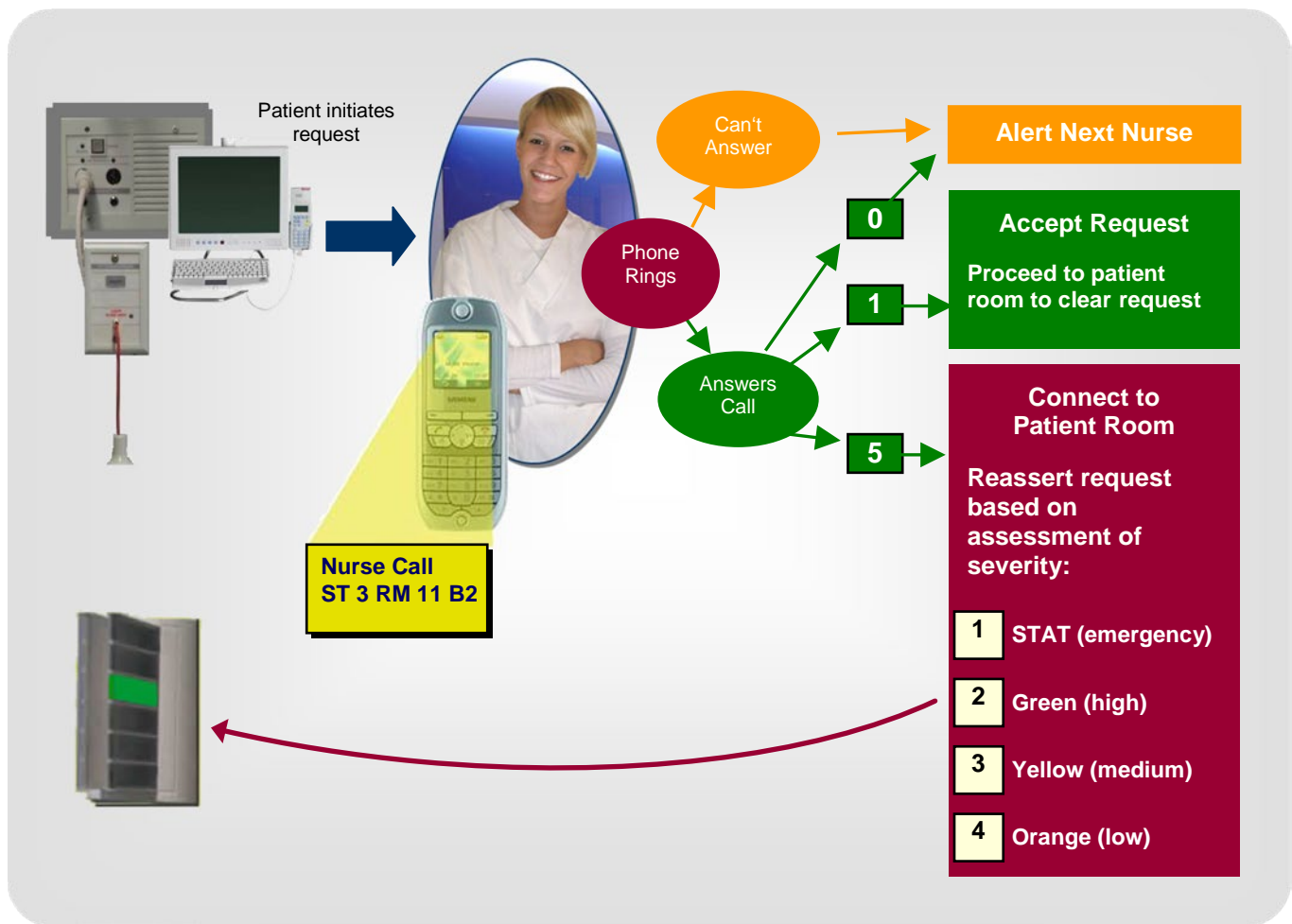
Nurse Call Mobility

DAKS connects to nurse call systems and provides a supplemental means of communicating patient assist requests to nursing staff equipped with wireless phones. The primary means of notification and clearing nurse calls (the standard nurse call console) remains operational whether or not calls are handled by mobile staff.

When a call or alert is raised through the nurse call system (e.g. from a bedside call button, shower cord, code button/panel, etc.), information about the call is sent to DAKS via industry standard ESPA-X or TAP protocols. Using the Alert Notification application, DAKS:

- places a call to appropriate mobile phone(s) showing the source and type of call on the text display of the phone
- plays audible guidance messages asking the nurse to either accept or decline the call
- offers the option (if supported by the nurse call system) to talk to the patient through the embedded nurse call intercom
- offers the option to connect to the telephone in the patient room (in the case of CorNet-NQ or SIP –Q speaker-equipped phones, without requiring the patient to answer the phone)

If the phone is busy on another call, nurses using HiPath Wireless CorNet-IP/SIP-Q Wi-Fi device or HFA compliant third-party phones can be given an intrusion message and directed to accept the new call. Otherwise, if the called nurse is busy, doesn't answer or declines the call, it is directed to another nurse(s). If no nurse accepts the call, an escalation notification can be sent to a supervisor.



Patient Monitoring Mobility

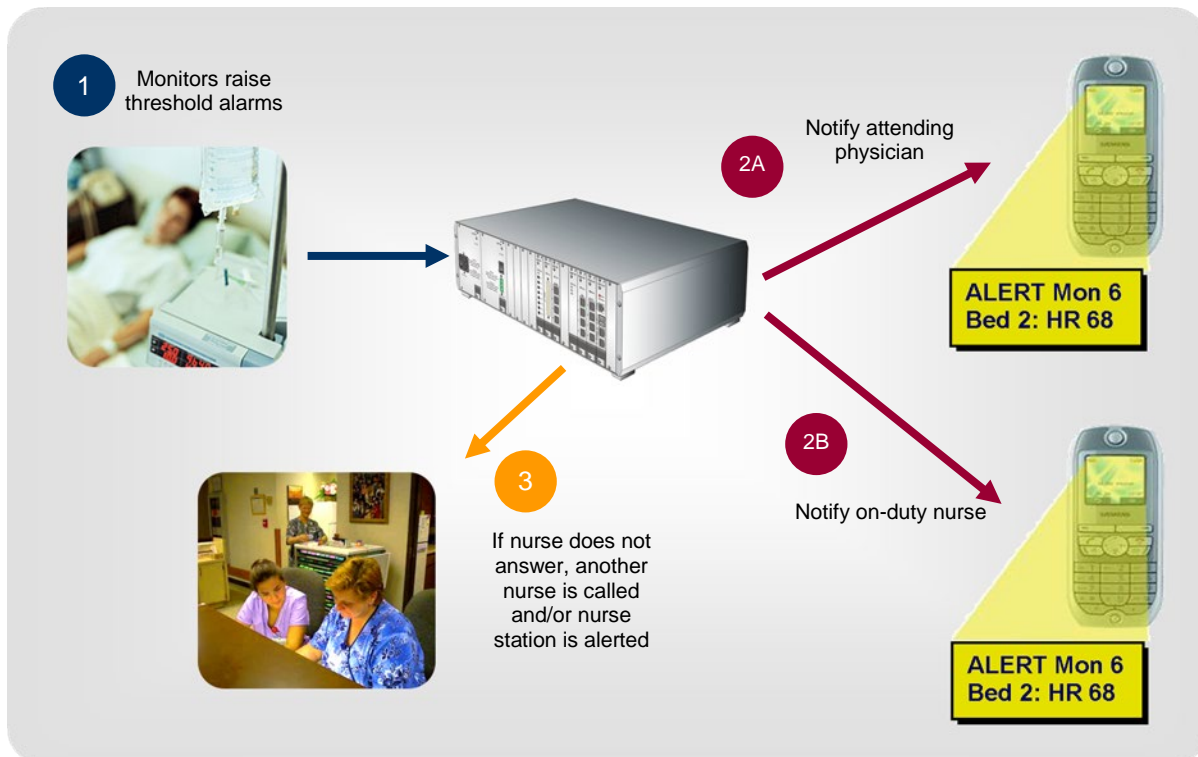
DAKS connects to Draeger Infinity Gateways and provides a supplemental means of communicating alerts raised by patient monitors to nursing staff equipped with wireless phones. The primary means of notification and clearing patient monitor alarms (the standard patient monitoring console) remains operational.

When a patient vital sign (e.g. heart rate, blood pressure, oxygen level, etc.) falls out of desired range, an alarm is raised by the attached patient monitor. The Infinity Gateway sends information about that alarm to DAKS via industry standard ESPA-X or TAP protocols. Using the Alert Notification application, DAKS:

- places a call to appropriate mobile phone(s) showing the source alarm and the vital sign that caused the alarm
- plays audible messages asking the clinician to either acknowledge or decline the call



If the phone is busy on another call, clinicians using HiPath Wireless CorNet-IP/SIP-Q phones or HFA compliant third-party phones can be given an intrusion message and directed to accept the new call. Otherwise, if the called clinician is busy, doesn't answer or declines the call, the call is directed to other clinicians. If no clinician accepts the call, an escalation notification can be sent to a supervisor. In addition to voice alerts, messages may also be sent to smartphones.



Code Announcements

DAKS replaces or augments overhead or radio paging systems for Code announcements. Code announcements can be initiated from a variety of sources, including:

- speed dial buttons on telephones
- the DAKS Operator console
- Nurse call systems with code button panels
- Attendant consoles using programmed dial strings or integrated host interfaces

Code announcements are made using the Alert Notification application, delivering voice and/or text notifications to mobile telephones, attendant desk and/or nursing stations. Code announcements initiated via telephone dial-in can be augmented with additional, ad hoc voice announcements recorded through the phone at the point of initiation. Code announcements initiated via the Operator tool can be augmented with additional content via Text to Speech at the point of initiation.

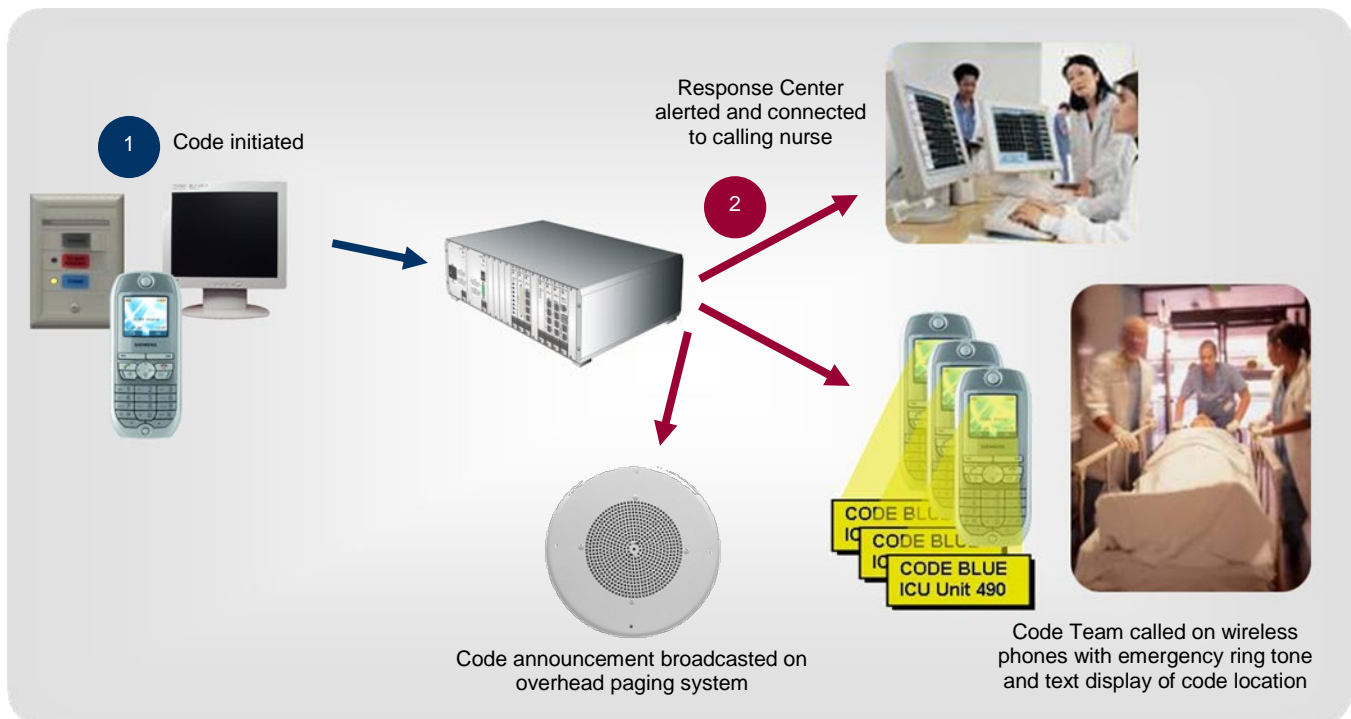


Announcements may include code alerts such as Code Blue or Code Red. Or, the objective can be to alert a Stroke Team or Housekeeping.

Unify enhanced features allow the Code announcement to:

- interrupt active calls on busy phones
- ring to phones even if they've been set to Do-Not-Disturb or forwarded to voicemail
- be differentiated by an urgent ring tone
- be played to speaker phones without requiring anyone answer the phone

Simultaneous activation of Emergency Conferences among code team members allows on-the-run collaboration and coordination of response activities.

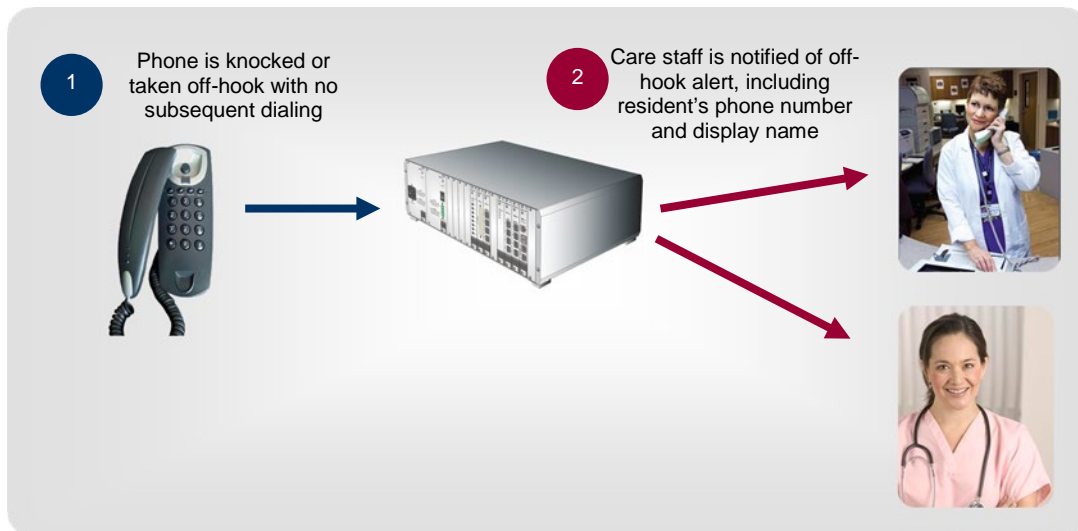


Off-Hook Alert

In continuing care facilities or retirement homes, a concern is patients or residents who fall or are unable to alert someone they need assistance. By simply knocking the phone off-hook, the resident can send notification to the on-duty staff that they need help.

The PBX off-hook recall destination for residents' telephones is routed to DAKS. If a resident knocks her/his phone off-hook or has a dial timeout, an Alert Notification is directed to the office and to care staff with wireless phones. The resident's phone number and PBX display name are shown on the system telephone text displays.

With the DAKS Performance Package, delivery of the alerts can be controlled based on security agents and care staff logging in/out of the application and/or by work shift schedule.



Staff Callback

Most hospitals rely on manual phone trees to fill staff vacancies. This process is time consuming and inefficient in times of crisis when the healthcare organization needs to mobilize a large number of staff members. DAKS automates the staff callback process and provides real-time status of the progress.



With one phone call or mouse click on a computer, DAKS initiates an Alert Notification to automate dial out to home and/or mobile phones of predefined nurses and doctors with alert announcements and instructions. The announcement alerts them of the situation and requests they report to a given location.

As the outbound calls are made, DAKS tracks the success or failure of contact and message delivery for each nurse and doctor in real time. Alert Notifications can ask for positive or negative responses to indicate if the staff member can report for duty. By tracking positive and negative responses, DAKS automatically notifies supervisory personnel whether or not the desired number of positive responses was received. DAKS can also automatically initiate additional callback scenarios, if necessary.

A - 200 : ER Staff Call Back (Calling subscribers...)

A - 200 : ER Staff Call Back Current result: 0002/0005 Duration: 00:01:22 Cancel

Subscribers in process

P...	Last Name	First Name	Position	Department	1. Location	1. Phone	2. Locatio
1	Shoemaker	Samantha	ER Doctor	Emergency	Building C	3142	
1	Smith	Jeff	ER Doctor	Emergency	Building C	3140	
3	Mayes	Scott	ER Doctor	Emergency	Building E	3141	

Subscribers successfully reached

P...	Last Name	First Name	Position	Department	1. Location	1. Phone	2. Locatio
✓ 3	Naylor	Kyle	Radiologist	Radiology	Lab 256	4164	Cell Phon
✓ 1	Maycock	Becky	ER Nurse	Emergency	Cell Phone	3148528002	Desk

Subscribers NOT reached

P...	Last Name	First Name	Position	Department	1. Location	1. Phone	2. Locatio
✗ 4	Hali	John	ER Nurse	Emergency	Cell Phone	6362303010	Desk

Status: Calling subscribers...

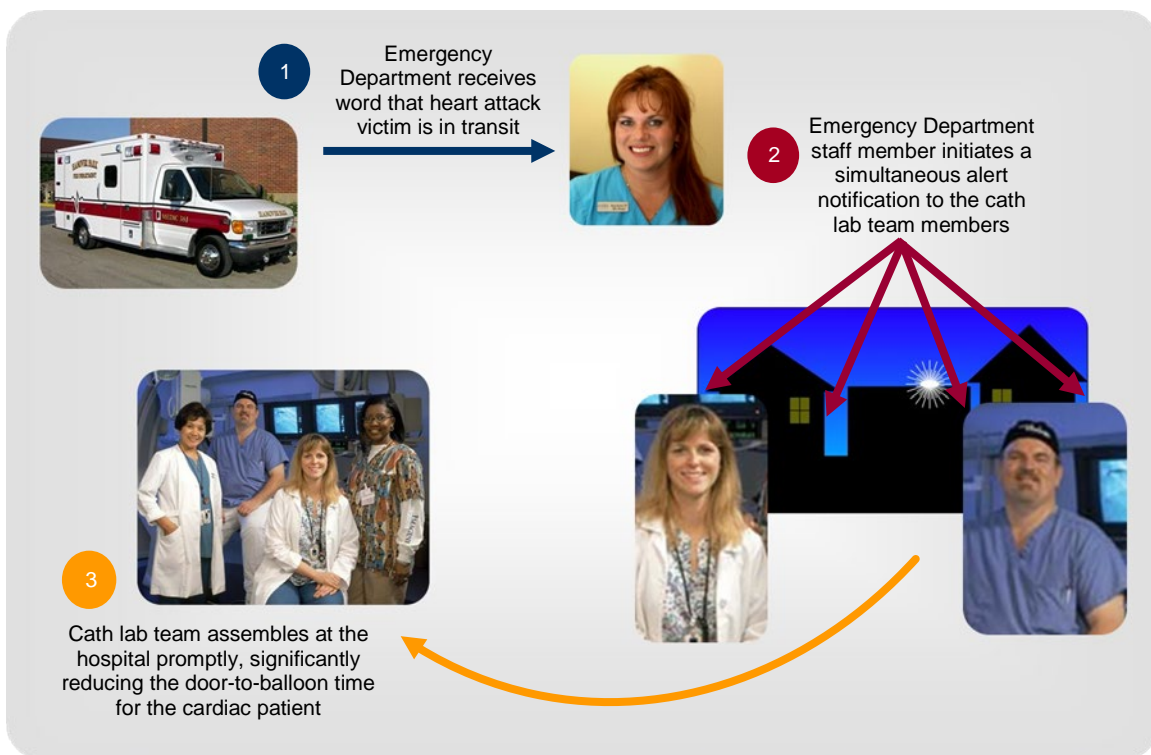
Door-to-Balloon

National guidelines now recommend that Door-to-Balloon (D2B) times take no longer than 90 minutes. Unfortunately, many hospitals seem to be unable to make the cut. They may lack resources or funding, or are simply short-staffed, forcing the hospital to not have a cardiologist and other responders on staff 24 hours a day. Having an on-call staff, rather than in-house, doesn't mean the hospital isn't trying to meet the 90 minute mark. To meet this critical objective, hospitals need a mission-critical solution.



An Alliance for Quality

By implementing DAKS, hospitals that rely on on-call staff for cardiac emergencies happening after-hours have the ability to meet the 90 minute D2B objective. Without a reliable communication system in place, contacting the appropriate staff members can take unnecessary minutes that could jeopardize the victim's life. With DAKS Alert Notifications, however, the Emergency Department can alert all of the appropriate staff members of the emergency situation simultaneously with a single call. This dramatically cuts down staff contact time and leads to a speedier arrival of the team. The sooner staff members arrive and get prepped, the sooner the heart attack victim can undergo this life-saving procedure.



Regulatory Compliance

DAKS is the perfect solution for hospitals that are struggling to keep up with regulatory compliance standards (e.g. TJC; NIMS; HICS) in regards to incident management. With DAKS, timely response is within reach for:

- Sudden epidemics (e.g. fatal strain of influenza)
- Mass casualty/injury incidents (e.g. building collapse, train derailment)
- Natural Disasters (e.g. hurricane, earthquake)
- Etc.

There are several key steps involved in the life cycle of an incident. At the forefront of these steps is the accurate, uninterrupted flow of communication. From alerting response team members of an incident, to sending out a broadcast of “all clear,” DAKS has different applications to fit the diverse needs of healthcare facilities and assist them in complying with standard regulations. DAKS is preparedness at its finest.

TJC – The Joint Commission (formerly JCAHO)

- Sets standards for healthcare organizations and issues accreditation to organizations that meet those standards. TJC conducts periodic on-site surveys to verify that “an accredited organization substantially complies with Joint Commission standards and continuously makes efforts to improve the care and services it provides.”



NIMS – National Incident Management System

- Provides a systematic, proactive approach to guide departments and agencies at all levels of government, nongovernmental organizations, and the private sector to work seamlessly to prevent, protect against, respond to, recover from, and mitigate the effects of incidents, regardless of cause, size, location, or complexity, in order to reduce the loss of life and property and harm to the environment.



FEMA

HICS – Hospital Incident Command System

- Purpose is to standardize responses by all “first responders” to emergency events in a Healthcare environment.



Implementing DAKS is a key part of maintaining healthcare compliance strategies. By leveraging the various DAKS applications (e.g. Alert Notifications, Emergency Conferencing and Info Telephone), hospitals and other healthcare facilities can surpass everyday standards and be prepared for the unexpected.

DAKS is the perfect solution for hospitals that are struggling to keep up with regulatory compliance standards (e.g. TJC; NIMS; HICS) in regards to incident management. With DAKS, timely response is within reach for:

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About Impact Technologies

When Impact Technologies was founded in 1990, our first product resulted directly from asking the simple question, "What can we do that will have a significant positive impact on your success?" We've never stopped asking that question. Our portfolio of high-impact solutions and services is based on the input of customers. We remain passionate about and dedicated to the success of our customers, helping them achieve their goals.

Impact delivers world-class solutions — on time, on budget and of superior quality. To achieve the highest level of customer satisfaction, we follow basic principles that have been proven over time to be instrumental in delivering Solutions with Impact.

- **Technology** - We are committed to the effective application of technology to advance the efficiencies and business practices of our clients.
- **Simplicity** - We believe that complex problems can have simple answers. We break down intricate issues into more manageable components.
- **People** - Our experienced staff works uncompromisingly to bring unequalled value to our clients and their projects. We push ourselves to be the best of the best and to develop methods and processes to work smarter and bring more value to our customers.

Impact Technologies provides integration services for advanced notification and collaboration solutions. Some of the capabilities available through integration include:

- Initiation of alert notifications and emergency and routine teleconferences from Attendant Console stations
- Dispatch/Command Center integration for notifications and response team collaboration
- Integration of voice/telephone notification capabilities into legacy emergency notification management systems
- Integration with nurse call systems and patient monitoring devices
- Coordinated initiation of text-message broadcasts in mass notification scenarios
- Facilities management system integration to alert facility managers and repair crews of equipment faults
- Integration with asset and personnel location tracking systems for enhanced resource management and security
- Adding notification and collaboration services to enterprise applications and business processes

Whether you are striving to meet your organization's unique day-to-day communications needs or assuring that you are prepared for the crisis that could happen at any moment, we encourage you to contact us. Our experienced professional services staff will partner with you to deliver communication solutions that are easy to use, and more importantly, highly adaptive to support your business rules and crisis response strategies.



Contact us at 314.743.1430 or
solutions@impacttech.com

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