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CLOUDDISPATCH

The Challenges of Dispatch and the Road Ahead

Dispatch Needs To Be More Than Just Voice

Dispatch communications is reactive by nature and predominantly limited to voice interaction. Today's RoIP standards are not truly interoperable, limiting public safety's ability to integrate and make the most of newly available solutions. Dispatch can often suffer from system siloing, requiring dispatchers to take many disparate pieces of imperfect information from different systems and connect the right people for the right job in a given situation. Traditional communication systems are pieced together, often requiring a lot of time, effort, and money to make them work in harmony.

Dispatch communications needs to be about more than sending and receiving audio calls from an old interface in a fixed location. As you are evaluating your dispatch needs, the following report provides helpful insight into what is coming.

The Future is Flexible

The National Public Safety Telecommunications Council (NPSTC) released a report in July 2020 on Mission Critical Push-to-Talk (MCPTT) and the future of dispatch consoles. In that report they highlight observations including:

- MCPTT represents a huge shift in thinking for public safety agencies
- MCPTT-enabled consoles give first responders new capability
- A new type of console will be required to access and control MCPTT features and capabilities
- MCPTT consoles need to support a wide range of operational scenarios
- The majority of public safety agencies are likely to use both LMR and MCPTT solutions at the same time and console solutions must provide the ability for telecommunicators to manage radio traffic on both networks easily

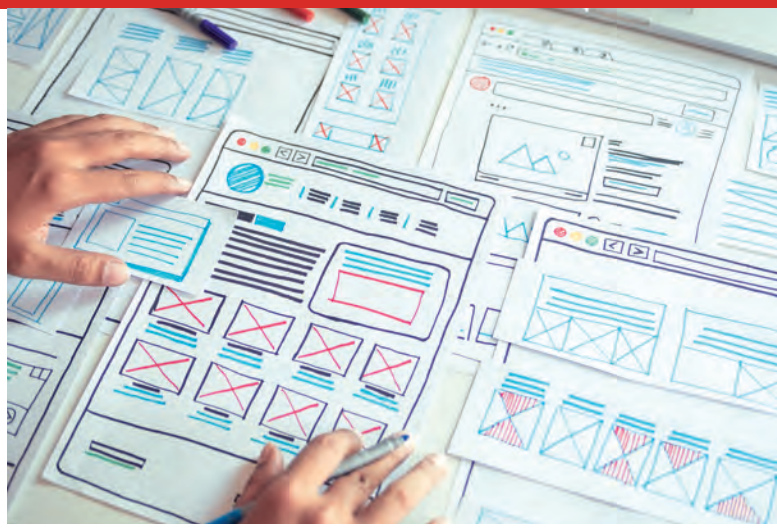
These assertions will shape the future of dispatch. This White Paper builds on them and outlines how an LTE/5G -enabled dispatch console will change operations.

1.1 Exact Fit User Interface

Description:

In dispatch, using a one-size-fits-all interface means your dispatchers are forced to adapt to limitations presented by the workflow. Dispatchers need to have easy access to radio groups, a telephone queue, and relevant inputs. The interface must feel intuitive, like working with an old friend, yet without unnecessary clicks and non-streamlined usability.

The increasing speed at which new technology and communications standards are being developed means that future dispatching software needs to be able to keep up. An extensible UI must be able to seamlessly integrate new features and capabilities as quickly as they are being demanded and adopted by agencies.



How this will change dispatch:

- Dispatchers will expect highly configurable screens.
- Supervisors will expect tailored work flows and system features to be available based on job function.
- Administrators will rely on the ability to assign focused activities based on permissions on an as-needed basis.

Use cases:

Use case 1: Command Center dispatching, with dispatchers sending and receiving radio and phone calls from their workstation.

Use case 2: Several dispatchers focused on a single event. A new dispatcher needs to be added in quickly with the same focused resources and information available to them.

Questions to consider:

Can my organization adjust the radio dispatch layout to suit the user type?

Can screens be configured ‘on-the-fly’ to enable focus on a specific incident?

1.2 Flexible Operational Location

Description:

In today's world, dispatchers and the operations team must be enabled to share communication and information via wired, WiFi or LTE-enabled laptop, desktop, tablet, and/or smartphone. It is imperative for operational continuity that dispatchers, supervisors, and captains be able to continue to dispatch despite emergency events happening around them. As discussed in the NPSTC report, utilizing LTE/5G opens up opportunities for communication, yet the need remains for the system to be grounded in LMR/DMR/P25 as required. Smartphones and dedicated mobile devices will play an increasingly important role in enabling information collection and distribution.

How this will change dispatch:

- The resiliency of operations will depend on location flexibility.
- Dispatch supervisors will rely on the ability to connect and monitor remotely.
- Dispatch won't be limited to a single command center facility.

Use cases:

Use case 1: Emergency situation forces a command center evacuation.

Use case 2: A supervisor or captain may want to monitor multiple, select radio channels or activities while away from the command center.

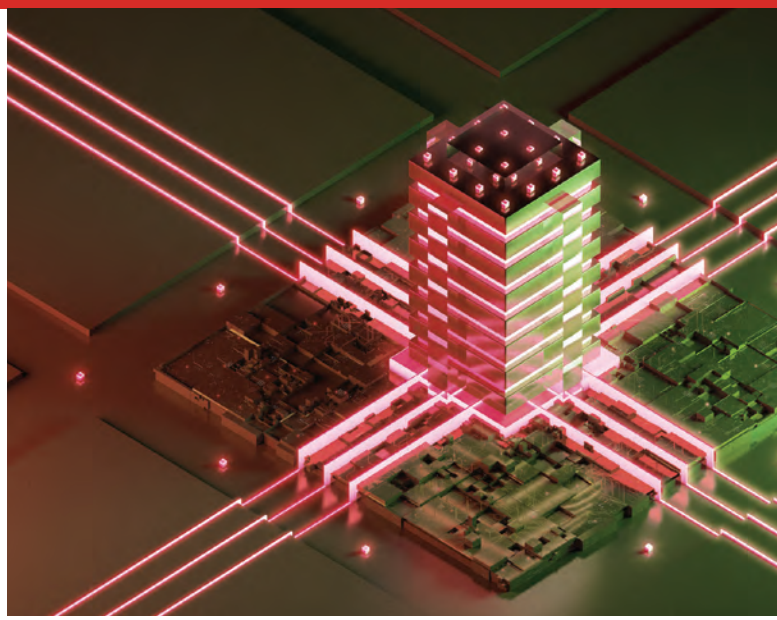
Use case 3: A pandemic forces a geographically disparate yet fully operational approach to dispatch.

Questions to consider:

If my dispatchers were unexpectedly unable to work from our Command Center, how would our operations continue?

How would our operations be improved if captains and supervisors were able to monitor operations remotely?

1.3 Information Rich / Empowered Dispatcher



Description:

Dispatchers' ability to develop and communicate situational awareness through a growing wealth of available and configurable data integrations such as social media, over-the-top service feeds, IoT data, weather, and video changes the nature of dispatch. Sensors and inputs make information available in real-time which was previously left to estimation. With enhanced information, dispatchers are better equipped to make decisions and enabled to utilize the full spectrum of resources available to them.

By integrating the data sources, information becomes seamless regardless of input system and available for common reporting and, in the future, the application of AI and machine learning. The growth of available information, integration, and application of intelligence will open an advantage to agencies, allowing a more efficient and effective operation.

How this will change dispatch:

- Dispatchers are empowered with key information in real time.
- Obstacles to response are anticipated and resolved, improving response times.

Use cases:

Use case 1: A forestry agency dispatcher utilizes local weather sensor information to anticipate changing weather conditions and inform field units to better combat fires.

Use case 2: A police dispatcher is able to access camera feeds for an event and monitor multiple cameras simultaneously while maintaining control over the communications for the event.

Questions to consider:

With access only to audio, what information are my dispatchers missing?

What input systems could be integrated to make the usability more streamlined and efficient?

1.4 Open Standards Technology-Bridging Approach

Description:

Much is made of the need for industry standards in critical communications, yet even with standards in place, true interoperability between device manufacturers is not always achieved. With the speed of technological change and the growth of the critical communication equipment and software ecosystem, direct integrations will provide a new kind of micro interoperability. This will not be primarily overarching standards-based, but through interoperability of integrated service providers. The move to software and Internet transmission of communication will change the nature of standards from primarily radio-oriented to real-time communication-oriented, including Over the Top PTT and MCPTT services. This introduces new expertise into the discussion. The future of dispatch includes flexible architectures and open integrations including bridging LMR, DMR, P25, and TRBO to LTE/5G.

How this will change dispatch:

- New technology will be adopted more quickly at a reduced cost.
- A wider range of service providers will emerge.

Use cases:

Use case 1: Data flow between radios, smartphones, and desktop computers, all connected.

Questions to consider:

How has my current dispatch console provider limited my choices of interconnected devices and services?

1.5 Secure and Reliable

Description:

The security and reliability of your system cannot be an afterthought. Dispatch systems need to be secure and data transmissions need to be secure during transmission and at rest.

Minimizing disruption due to growing and increasingly sophisticated threats will become more expert-dependent. The hope that a critical communications network would be protected from cyberattack by way of obscurity, hiding and hoping the network does not face significant security attack, is increasingly being exposed. Future dispatch approaches will include multi, hybrid and multi-location cloud-based architecture with geo-diversity and geo-redundancy. To maintain a high availability (HA) environment, increasingly sophisticated tools, approaches, and architectures will be needed.

How this will change dispatch:

- Security and reliability has always been an essential element of critical communication. However, potential penetration and DoS risks to all connected systems have increased. Proactive approaches that include both inside and outside expertise will become increasingly necessary.

Use cases:

Use case 1: A denial-of-service (DoS) attack is launched against critical system infrastructure.

Use case 2: During a natural disaster, infrastructure in a specific geographic area becomes compromised.

Questions to consider:

Am I relying on old security protocols to ensure the safety of my data and transmissions?

Does my dispatch console architecture rely on a centralized and single point of failure approach?

1.6 Evergreen Cloud-Enabled Service

Description:

“Cloud platforms can help deploy new digital customer experiences in days rather than months and can support analytics that would be uneconomical or simply impossible with traditional technology platforms. - McKinsey & Company

Cloud architecture is the ideal platform for the evolving security and reliability requirements previously discussed as well as for enabling data integrations. Along with these baseline requirements, the cloud enables simple usage scalability and the ability to provide regular functionality updates. With cloud solutions requiring less infrastructure equipment to maintain, agencies will be better positioned to more efficiently allocate staff. Software approaches allow for accelerated delivery and deployment schedules minimizing the need for forklift upgrades or technological obsolescence.

Government organizations of all sizes are facing funding restrictions. Dispatch solutions must evolve to provide financing flexibility, including CapEx financing and OpEx options, to ensure reduced fixed costs, flexible scalability, and pay-by-need equality.

How this will change dispatch:

- Evergreen systems and more strategic use of IT/radio resources will become the expectation.
- Cloud adoption will create a more robust system and ensure public safety makes the most of the pace of technological change.

Use cases:

Use case 1: Public Safety agency facing a manufacturer’s end-of-life notice on their existing dispatch system.

Use case 2: Utility agency interested in adding new system features without access to significant capital.

Questions to consider:

How would I utilize my IT/radio staff if the radio console system required less maintenance?

When will my existing dispatch equipment need to be modernized?

InterTalk's Solution: Cloud Dispatch

InterTalk Cloud Dispatch represents a significant shift in critical communications information distribution and dispatch. The mission of the product is to both simplify and expand dispatchers' abilities with one dispatch system that brings a convergence of reduced hardware, valuable information, and simpler task management in one intuitive dashboard experience.

InterTalk Cloud Dispatch supports a wide range of operational scenarios. It enables your dispatchers to send and receive radio and telephone communications from their standard computer, laptop, tablet, or smartphone on any LAN, WAN, LTE, 5G, or WiFi connection, giving your operations unprecedented flexibility to move when or as needed. It can utilize LMR, PTT over LTE, MCPTT and other integrated solutions, at the same time providing the ability for dispatchers to easily manage radio traffic on both networks and phone networks.

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Dispatchers and operational staff can work wherever they find themselves -- be it at a PSAP, command center, at home, or at the scene of an event. As a result, you are more resilient and enabled for operational continuity.

InterTalk Cloud Dispatch addresses the challenges with today's radio dispatch systems, maximizing flexibility in usability, locational flexibility, informational intelligence, integration, security, reliability and cost-effective technological relevance. The road ahead for dispatch is a flexible service approach and InterTalk Cloud Dispatch is leading the way.

To find out more about InterTalk Cloud Dispatch and InterTalk's innovative dispatch solutions, visit **intertalksystems.com/products/cloud-dispatch** or contact:

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