



INTELLIGENT MIDDLEWARE. THE INVISIBLE GLUE TO ENABLE TRULY INTEGRATED COMMUNICATIONS.



MOTOROLA SOLUTIONS

HOW TO GIVE YOUR TEAMS SECURE ACCESS TO THE APPLICATIONS AND INFORMATION THEY NEED IN A WORLD OF MULTIPLE APPLICATION VENDORS

Change is in the air. Radio remains a crucial technology for Public Safety teams, but employees also want to take advantage of the technology benefits of smart phones. For CIOs working in Public Safety, the challenge is significant – how can your operation enable communications across multiple application vendors and multiple technologies, in a safe and effective manner?

At Motorola Solutions, we appreciate your organization probably wants the best of both worlds – it wants to use both radio and leading edge applications, and your frontline workers just want to be able to use the right devices to communicate and collaborate. The demand for land-mobile radio (LMR) and broadband-enabled applications means the majority of mission critical organizations are likely to use both LMR and LTE technologies. Estimates suggest there will be more than four million LTE-equipped devices in public safety service by 2020, alongside an installed base of 21 million LMR radios¹.

Your agency personnel will demand access to applications designed specifically for them. Multiple vendors will be offering focused, context relevant applications that meet the specific requirements of each user group. The result is an ever growing number of applications that, while delivering huge business benefits, could result in structural chaos. CIOs must get ahead of this problem – and trusted partners can help.

If your agency doesn't provide the right applications and policies, your staff could be choosing to use their own devices or networks to communicate through their preferred application. Such an approach could create very real security issues, and siloed applications will surely create inefficient, possibly dangerous, scenarios. Take a situation where your agency deploys applications from 10 different vendors, each serving the needs of a particular user group, with each application having an independent, and siloed, messaging or location capability. Now imagine trying to synchronize those applications during a major incident where the cost of a crucial message not coming through, or a location not being accurate, could jeopardize your team's safety.

At Motorola Solutions, we have a storied history in communications, with more than 80 years of experience building mission critical communications systems for governments and related organizations. We are the world leaders in Public Safety deployments of LTE technology and the use of broadband-based devices and applications. Our Intelligent Middleware is a powerful set of services that ensure seamless communications between radios and smartphones to create a centralized approach to messaging, location and security, whatever the flavor of applications your workers choose to use.



4 MILLION
PS LTE DEVICES.



21 MILLION
RADIOS.¹

The genie, in terms of workers at the front line wanting to use their smart devices to communicate, is out of the bottle – and IT leaders may struggle to stop the growing catalog of applications being deployed. CIOs involved in critical communications must consider how they will increase the communications options for frontline workers but ensure seamless collaboration from LMR to broadband, from private networks to carrier networks in a secure and efficient manner.

Thankfully, help is at hand. If you are a CIO, you can use Intelligent Middleware to make LMR and broadband an integrated element of your coordinated communications strategy.

HOW CAN INTELLIGENT MIDDLEWARE HELP?

With this explosion of choice and so many applications available, your fear might be the lack of integration between environments and vendors. The technology in the officer's hand – and the networks he or she are communicating across – should not be an impediment to connectivity. For any organization, it is crucial that employees can collaborate together, regardless of the device they are using.

Intelligent Middleware is the invisible glue that holds critical communications together – the technology might not be visible but the business benefits are clearly noticeable. This underlying technology produces a more dynamic work group communications environment that can be leveraged by applications running on your LMR and broadband networks. You can use Intelligent Middleware to bring together the best elements of radio and broadband in order to accomplish four things:

- Centralize the group and create standards around messaging. Groups are crucial to the way your organization works, and Intelligent Middleware can connect teams across networks.
- Offer the capability for applications to send a message to any user or any group, regardless of device or network.
- Create a single definition of location. Intelligent Middleware provides a central database for all user locations, regardless of device. This centralized data can then be queried by any application. Users can use this location to add contextual information and to determine actions at specific locations.
- Develop single sign-on and application authentication. No matter how many different applications an individual uses on their device, they sign in only once and are authorized to use your enterprise definitions.



1.6 MILLION
APPS IN THE GOOGLE PLAY
STORE WHILE iOS USERS
CAN CHOOSE FROM ABOUT



1.5 MILLION
APPS²

BEST PRACTICE – INTELLIGENT MIDDLEWARE IN ACTION

A key feature of Intelligent Middleware is a central definition of groups. Given the highly dynamic nature of policing, allowing application vendors to create siloed definitions of groups is not only inefficient: it can also compromise safety. If an application has an incorrect definition of who is in a group how can you ensure the right officers are receiving the right communications? With Intelligent Middleware, group definitions are stored centrally so every application has access to the same definitions, even for groups created by another application, ensuring that any time an application needs the latest definitions, it has instant access.

Location-awareness can play a key role in increasing safety and efficiency – and Intelligent Middleware provides a central database for all user locations, regardless of device. This centralized data can then be queried by any application and used to determine actions. Battery management can be a significant consideration for frontline policing, and Intelligent Middleware's centralizing of location information can significantly reduce battery drain when compared to multiple applications each querying the same device for its location.

Our messaging platform offers the ability to send images, audio memos, video clips, map clips, and text. Centralizing the message service ensures all users get the service they need, avoiding the pitfalls of trying to synchronize multiple applications vendors' siloed messaging services. In addition, our platform automatically understands the capabilities of the device it's sending data to and will automatically strip out content a device is not capable of receiving. A message containing text and a video clip will display in full on a smartphone, but display text only on a radio. Lastly, our service is based on the XMPP messaging protocol, allowing integration to enterprise messaging systems extending the reach of the capability to office based users.

Intelligent Middleware provides the ability for IT teams to develop a single sign-on solution to the security challenges associated with using applications from multiple sources. No matter how many different applications an individual uses on their device, the user signs in once and is authorized to use all tools. Single sign-on can boost productivity and reduce user frustration, eliminating the need to remember multiple username and password combinations, cutting the time spent re-entering passwords and slashing the amount of calls to help desks about forgotten credentials. Best of all, single sign-on can be federated to your existing IT systems so password formats and refreshes are common across all applications, both on device and in the office.

NOW IS THE TIME TO CREATE A CENTRALIZED APPROACH TO MESSAGING, LOCATION AND SECURITY

CIOs in mission critical environments need to know their frontline users can communicate effortlessly and effectively. A raft of broadband-based applications can provide new forms of connectivity, but only if collaboration is maintained in a safe, efficient, and secure manner. Intelligent Middleware binds LMR communications with broadband, allowing police personnel to take advantage of both traditional radio technology and the large variety of applications in the digital economy.

The number of devices and applications connecting to the network will continue to increase. Your users will want to take advantage of many different applications from many different developers. Your organization will need to ensure that the growing number of applications and vendors does not lead to fragmented, poorly managed communications. Rather than losing out on potential benefits, CIOs in mission critical industries must deal with this rise in connectivity now. They should work with a trusted partner who has unmatched expertise in public safety communications and can help deploy Intelligent Middleware to create a coordinated approach to messaging, location and security.

At Motorola Solutions, we provide a future-proof platform for change. Our continued expertise, allied to the huge potential of digital technology, means there has never been a better opportunity to investigate a new approach to team communications. Now is the time for CIOs in mission critical industries to embrace change.

SOURCES

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2. "Number of applications available in leading app stores as of July 2015", statista, <http://www.statista.com/statistics/276623/number-of-apps-available-in-leading-app-stores/>
3. Digital universe figures:, EMC2, <http://www.emc.com/leadership/digital-universe/index.htm>

For more information on how Motorola Solutions is helping public safety agencies work better, smarter and faster through next generation technology, visit motorolasolutions.com/intelligentmiddleware

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