

## The Distributed ICCS Solution

### Converging Disparate Communication Technologies

**CORTEX™ is a TETRA-enabled Software Integrated Communications Control System (ICCS) in use at the heart of emergency service organisations worldwide. It seamlessly merges radio despatch, telephone call handling, video monitoring and web services, enabling control room operators working in stressful environments to conduct their duties effortlessly.**

APD has been delivering mission-critical solutions to emergency services worldwide since deploying the first CORTEX system to Grampian Police in 1996. CORTEX has been successfully implemented at: Swedish Police, Norfolk Fire Service, London Ambulance Service, Fife Constabulary and the Police Service of Northern Ireland, as well as nearly half of the Police Forces in England and Wales. Compatible with analogue and digital infrastructures, CORTEX was the showcase ICCS application for the UK's Airwave TETRA network, which went live in 2000 at Lancashire Constabulary.

Designed for users by users, CORTEX is continually evolving to meet changing operational demands. Working closely with an active User Group helps APD shape the future of control room communications, providing input into the roadmap with functionality that will meet the future needs of Emergency Service customers. Intuitive to use, staff are quickly operational, managing voice and data traffic and accessing key information instantly on user-friendly touchscreens, in their own language. Feature-rich, it provides: one touch dialling, instant record/play back, web browser, audio level preferences and dynamic dialling from searchable directories. CORTEX offers a fully integrated control room suite, interfacing with Command and Control systems, APD's Resource Location and Mobile Data solutions. Using industry standard technologies, a resilient and fault tolerant system is delivered with a robust architecture to provide vital fallback connectivity and ensure service continuity in extreme situations, essential in mission-critical environments. CORTEX embraces the full range of TETRA functionality, providing a profoundly flexible and scaleable communications system that empowers control room operators to manage incidents more effectively and meet Policing Performance Assessment guidelines for call handling.



### CORTEX is delivering Forces key service improvements and benefits:

- Improved communications through efficient call handling and routing
- Enhanced incident response through focused communications
- Scaleable and flexible, ensuring your investment is fully future-proofed
- Increased officer safety through monitored channels and panic alarms
- Proven system handling high volume traffic
- Minimum training needed with intuitive Graphical User Interface
- Reduced costs by streamlining desktop equipment and ongoing support burdens
- Better cross-border and external agencies incident support
- Higher quality of management information, audit trails and accountability
- Service continuity assurance even during system failure
- Operators can manage incidents more effectively and meet Policing Performance Assessment guidelines for call handling

### Operational 24/7/365...

#### *Proven City Response*

During the July 2005 London terrorist attacks, CORTEX was commended for its resilience, delivering service continuity and enabling the London Ambulance Service response teams to focus on co-ordinating their resources during a series of major incidents.

#### *Total Island Control*

The Isle Of Man TT races is a major event on the island, during which an unprecedented level of voice communications puts severe operational pressure on the Emergency Services. CORTEX is accredited for its high performance and reliability, in particular during such large events where public and officers safety is paramount.

#### *Countrywide Coverage*

Swedish Police consolidated all their Control Rooms in 2000 using CORTEX to provide an improved public service across the country. The TETRA infrastructure will enable the wider coverage, and CORTEX integration with the Steria STORM command and control system is key to improve incident response further.



# CORTEX

## How CORTEX can help your Service

### Improved Communications

Converging disparate telephony and radio technologies, helps streamline communications, simplifying the despatch process. The full range of TETRA facilities is supported, including Dynamic Group Number Assignment (DGNA). Legacy radio is seamlessly migrated to digital infrastructures.  
*Lancashire Constabulary enjoyed greater coverage and enhanced voice quality by embracing TETRA digital radio. CORTEX enables the fine grained control of these new flexible resources, reaping the maximum benefit from the Force's investment.*

### More Efficient Routing

CORTEX presents calls directly to the operator's touchscreen, dynamically routing and prioritising calls. Tight integration with command and control systems accelerates incident logging and despatch.  
*Cambridgeshire Constabulary operators process calls quickly using the touchscreen without having to scroll down pages or use a mouse. Instant access to external numbers allows them to rapidly complete calls. Conference facilities connect expert advisors with on-site officers, providing tactical assistance.*

### Enhanced Response and Despatch

Targeted despatch of resources to incidents is achieved through accelerated communications. An improved public service is delivered by integrating command and control and resource location services.  
*South Eastern Health Board (SEHB) saw immediate response improvements and call processing efficiencies when they were able to access directories instantly, eliminating the need to return calls or put calls on hold.*

### Saving time

Tight integration with command and control systems improves response by automatically logging incidents, critical in life-saving situations. Aliasing and dynamic updating facilities enable operators to seamlessly communicate voice and text exchanges with officers, using collar numbers, call signs and radio ID's interchangeably. CORTEX facilities allow instant access to force knowledge systems and resources including: CCTV, intranet and phone directories.  
*Hampshire Constabulary uses CORTEX to manage their single non-emergency number (SNEN) service using the rapid dynamic number dialling. Operators save time using hotkeys, redial lists and number search facilities to automatically dial numbers.*

### Improved Incident Management

Cross agency/force collaboration is achieved by moving all resources to a dedicated talkgroup, thereby removing non-associated voice traffic. A more focused incident response and sharing information allows connected resources to actively participate or listen to the evolving incident.  
*Forces in the UK are better equipped to handle cross-border communications using inter working talkgroup facilities with neighbouring forces, preparing them to receive an incident into their area. Promoting closer co-operation, all resources are aware of the changing situation, adapting their tactical response.*

### Reliability and Resilience

High availability and fault tolerance is essential in delivering a mission-critical public service. CORTEX is highly scalable and has been designed to support multi-site and virtual control rooms of hundreds of users.  
*Cambridgeshire Constabulary chose CORTEX for its robust architecture planning for their worst case scenarios. Reassured of the fallback facilities, they were satisfied that communications with Airwave would be maintained. Service continuity is vitally important during critical incidents.*

### Flexible and Future-proofed

CORTEX offers a generic interface to accommodate TETRA digital networks and is backward compatible with analogue systems. Latest technologies are incorporated such as: Voice over IP (VoIP), Computer Telephony Integration (CTI) and network technologies, connecting dispersed control rooms; automatic vehicle location and mobile data solutions.  
*Lancashire Constabulary is extending operational improvements by integrating resource location and mobile data services to field officers. They anticipate performance and public safety improvements will be achieved by automating routine field tasks, reducing control room traffic and accelerating incident response.*

### Reduced Costs

Single touchscreen access to analogue and TETRA radios, CCTV, telephone and web services reduces the need for several computers at each operator's desk.  
*All forces using CORTEX experience a reduction in their IT hardware expenditure with the decreased burden of on-going support and maintenance costs. Operators are also equipped with a Push-To-Talk footswitch, audio mixing unit and a common headset to handle disparate audio sources simultaneously.*

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