

## Mobile Phone Detect & Deny technology for Prisons



Since the advent of mobile phone technology there has always been the challenge of detecting and denying the illegal use of them in the prison estate. Different approaches have evolved over time ranging from simple signal jamming to the deployment of phone 'grabbing' networks to try and monitor activity. Each has its own consequences – spill-over to the public networks outside the perimeter, high cost of technology, agreements with public network carriers and not least the advances in smartphone technology to avoid such interventions.



## A new approach

Capita's latest proposition is a new hybrid approach, making use of new, low-cost mobile pico-cells and precision RF jamming curtains set up within prisons.

This approach solves the problems highlighted in older technology to deliver a cost effective mobile cellular detect & deny solution.

- An 'in-prison' mobile network is created with deployment of a number of very small, low power cellular 'pico-cells' throughout the prison estate.
- The 'pico-cells' make it much easier to get a very accurate location fix on any mobile that connects to the network from within the prison.
- Illegal mobile devices are blocked from connecting to any external public cellular base station by setting up a Radio Frequency (RF) 'curtain' that degrades network coverage within the prison estate, leaving the 'pico-cell' network fully accessible.
- Illegal mobile devices can be located quickly, and blocked immediately, after they have been detected and, if required, a violation message can be sent to the user of the mobile device. Alternatively, individual illegal devices can be permitted to connect to the 'pico-cell' network, with it appearing to the user as a standard national network and all of the call or message details can be monitored and recorded.
- Authorised mobile devices will operate effectively throughout the prison estate.

## Benefits

- This hybrid solution is much easier to install, configure and tune
- Requires no negotiation with the national mobile providers.
- Illegal smartphone apps cannot be used to manually bypass the in-prison 'pico-cell' network due to the RF curtain degrading all external signals.
- All authorised mobile calls are routed via the existing prison fixed telephony network, and can be separated for legal use by staff and 'covert monitored' use by inmates.
- The RF jamming curtain, is a much lower power 'external signal degradation' approach rather than a full RF jamming solution, which ensures no impact on legitimate users located near the prison.
- The large number of small 'pico-cells' deployed ensures that any mobiles can be triangulated and located very effectively anywhere inside the prison estate.
- The 'pico-cell network' will make use of the new structured networks being installed in prisons, which means there is very limited additional infrastructure required to install this system.



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