

British Telecom Builds PIKA-Powered Prison PBX System



In the United Kingdom (UK), prison inmates have a legal right to make phone calls. However, those calls are closely monitored by authorities, both from the perspective of public safety and that of billing. Prisons need to know which inmates make calls and when, and must be able to accurately charge inmates for those calls.

In answer to the unique requirements of prisons, Europe's largest telecommunications carrier, British Telecom (BT), designed a specialized prison private branch exchange (PBX) system to enable prison staff to ensure public safety while granting inmates their legal right to telephone communication. To form the central core of the systems, BT chose PCI digital voice boards from PIKA Technologies, as well as analog trunk and station boards.

The result is a highly fault-tolerant communications system that allows BT to deliver secure voice services to more than 275 prisons in England and Wales - and to broaden its market for the system throughout Europe.

PIN-Based PC-PBX

The specialized PBX is a personal information number (PIN)-based system. Callers identify themselves to the system using a personal information number, and the system's computer checks whether the individual is allowed to call a particular number, and whether s/he has the means to pay for the call.

At the core of each system is PIKA PrimeNet PCI digital voice boards, which offer T1/E1 network access at market-leading density: available in single, dual or quad span configurations with up to 120 channels per board. PIKA Daytona station interface cards provide connections to analog station lines.

Customer: British Telecommunication plc is one of the world's largest telecommunications carriers, and the oldest carrier in Europe.

Challenge: To develop a PC-PBX to meet the security, reliability and call accounting requirements of the federal prison system.

Solution: PIKA PrimeNet PCI digital voice cards; PIKA Daytona station interface cards; PIKA MonteCarlo SDK.

Benefits: Deployed a highly secure and exceptionally reliable PC-PBX system; successfully integrated PIKA voice processing with QNX embedded operating system.

BT required technology that was highly reliable. Reliability was necessary to ensure this new system would have a long life, but also to minimize problems within the prisons. If a phone system in a prison goes down and inmates are denied the ability to make calls, they are quick to complain. BT reports that the PIKA-based PBX has had very high uptime over five years, across hundreds of sites. The added benefit of this highly reliable system also means a lot less time spent doing field maintenance and upgrades.

Flexible Programming Access

Access to PIKA applications programming interfaces (API) was also an important factor in BT's choice of PIKA technology. It enabled BT to integrate an embedded operating system from QNX - the QSSL QNX RTP - that is widely acknowledged as one of the most reliable in the world.

The systems also include features that play a role in supporting the UK's judicial system, which allows for recordings of inmate phone calls to be admitted as evidence in court, subject to particular guidelines. To that end, the PC-PBXs feature highly robust audio logging applications.

John Bassett, former divisional Head of Technology at BT, says that "PIKA is a leader in today's PC-PBX markets and their products have a well-deserved reputation for reliability, fault tolerance, scalability and innovation. We're especially impressed with the overall functionality of the PIKA MonteCarlo SDK as well as the voice processing capabilities of the PrimeNet MM boards."

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Public safety and the law are also upheld through the ability to specify access to outgoing and incoming calls. Each inmate is pre-authorized to make calls to a cleared list of phone numbers, and to receive calls from an approved list of phone numbers as well - all other numbers are blocked from the user of that particular PIN number.

Each PBX provides secure access to BT's E1 integrated services digital network (ISDN) from each location. Two chassis are located at each site to provide redundancy. BT is actively marketing the solution to other carriers within Europe. Bassett adds, "PIKA's components enable us to deliver the kind of industry-leading solutions increasingly required by our customers as well as highly sophisticated end users."

About PIKA Technologies

PIKA Technologies designs and manufactures computer plug in voice cards and software that connect a computer system to both TDM- and IP-based networks to provide advanced voice services. For almost two decades PIKA Technologies has been serving companies around the world that require voice cards to design sophisticated phone services for recording systems, voice services applications, and PC-PBX systems. The company has built a reputation for delivering innovative products and exceptional technical support by working closely with its customers. Headquartered in Ottawa, ON, Canada, the company has ranked in The Branham300, an authoritative ranking of successful Canadian high tech firms, for four consecutive years. Visit www.pikatechnologies.com or call +1-613-591-1555 for more information.



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