

## Automatic Configuration and Software Upgrade Solutions for Large Network Deployments

**The Customized Auto Configuration And Download Feature Of The BANDIT™ Provides A Plug-And-Play Solution For Large Network Deployments.**



### Problem

The migration of large legacy networks to secure IP-based networks typically requires a massive change-out of equipment and a huge expense devoted to training and installation. The challenge for many large enterprises is to find a low cost and less disruptive way to update the configurations and software of routers at every location, which is necessary for the conversion of legacy data for transport across IP.

For example, the online legacy gaming network used by the Massachusetts State Lottery Commission was subject to numerous limitations and left little room for expansion. They needed to move their circuits from 9.6K DDS multi-drop network to a more robust and reliable IP network with a redundant IP backbone. The new network would provide them with increased bandwidth and the ability to utilize new IP-based lottery terminals in the future. This is necessary for the introduction of new lottery games and the promotions needed for increased revenue.

The Lottery's online gaming network consisted of 8,300 lottery terminals run out of two data centers. The migration process required the replacement of a CSU with a router at each of their 8,300 retail locations. This is a fairly straight forward process, but the time required for training technicians on new IP technologies, configuring each route, and ensuring the configuration is correct is costly and labor intensive. The lottery required a plug-and-play, single box solution that included X.42 to IP conversion, encryption, network management, IP routing support, and an automatic software configuration feature. It was important that the entire process be completely transparent to the retailer, minimizing downtime during the circuit conversion and allowing for easier maintenance in the future.

### The Encore Solution

Encore Networks addresses today's large network deployments with a customized Auto Configure and Download feature contained in their BANDIT™ family of environmentally hardened (rugged) routers.

At the beginning of the Massachusetts State Lottery project Encore Networks, the Lottery and its Carrier developed a cut-sheet for all network parameters including IP addresses, Frame Relay DLCI's, and Lottery terminal information at all 8,300 locations. Once completed, Encore built the configuration files and stored them on server residing at the Lottery's data center. After the carrier built out the network and the host site routers were configured, the Lottery was able to deploy the BANDIT™ to the retailers.

When the BANDIT™ was plugged in at the remote retail location and the Frame Relay connection was made, Encore's customized software connected to the server, downloaded the configuration file and then reset. When it came back up, the BANDIT™ was fully configured for that particular retail location. This entire process is accomplished in minutes and once completed, the Lottery terminal is communicating with the network and the technician can leave for the next install. The BANDIT™ verifies its software version with the server to ensure it has the latest version, if it doesn't the latest software will download automatically.

The Auto Configuration feature of the BANDIT™ greatly simplified the rollout of all 8,300 routers by providing the Lottery with a true plug-and-play solution. The Download feature provides the ability to automatically upgrade all future software which may be required to introduce new games. Together, these two features saved the Lottery thousands in labor costs.

