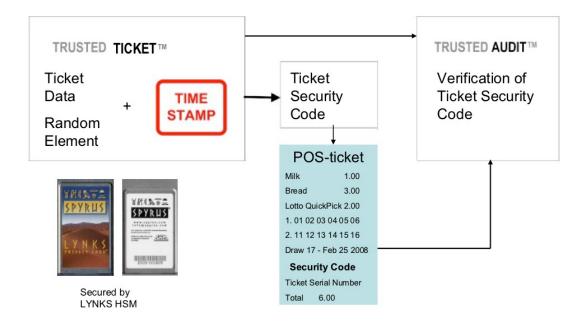
### Szrek2Solutions

Trusted Ticket<sup>™</sup> Overview

# Trusted Ticket<sup>™</sup>

Szrek2Solutions' Trusted Ticket<sup>™</sup> provides ticket authentication for lottery tickets and electronic receipts, to limit exposure to possible ticket forgery and to prevent potential fraud. Each ticket or receipt obtains a unique security code that allows for the verification of authenticity, which can be performed before a prize payment.

- A verifiable method of securing authenticity of POS lottery tickets and electronic receipts via use of Ticket Security Code, consisting of time stamp of ticket data (time stamp is a digital signature of ticket data and transaction time)
- Ticket authenticity verified independently from gaming system to endorse prize payment, providing protection from insider fraud
- Using field-proven technology pioneered in Trusted Draw<sup>™</sup>, Trusted Play<sup>™</sup> and Trusted Audit<sup>™</sup>



#### Trusted Ticket<sup>™</sup> Solution Overview

- Trusted Ticket Server is connected to Lottery Gaming System
- Trusted Ticket Server generates unique Ticket Security Code for wager transaction, based on time stamp of ticket data and a random element
- Ticket Security Code is generated after transaction is processed by Lottery Gaming System and appended to wager data and sent to POS terminals
- Ticket Security Code is printed on tickets by POS to provide ticket security
- Ticket data is logged (in real-time) to Trusted Audit Server
- Ticket Security Code is optionally verified at validation time by Trusted Audit Server
- Ticket authentication is performed:
  - On-line, by Lottery Gaming System (independent authentication process, using ticket data from the gaming system) or



Szrek2Solutions Proprietary 2017-2022

## Szrek2Solutions

### Trusted Ticket<sup>™</sup> Overview

- Off-line, by Trusted Audit<sup>™</sup> or by specialized GUI
- For ticket validation standard ticket serial number is used (standard process currently used)
- For authentication all critical ticket data is used
- Additional transaction information can be sent from POS terminal and processed by Trusted Ticket Servers only. This information can further identify selling device and wager transaction
- Standard XML–RPC interface is used between Lottery Gaming System and Trusted Ticket Server

### Trusted Ticket<sup>™</sup> Technology:

- High speed transaction time stamp methodology used, patented by Szrek2Solutions
- Hardware Security Module (HSM) used for cryptographic functions is:
  - Tamper evident
  - NIST certified
  - High speed
  - Includes Real Time Clock
  - Each digital signature is accounted for
- Ticket Security Code includes random number generated with Szrek2Solutions patented RNG unpredictable auditable random numbers
- Trusted Audit verification function is used to confirm Ticket Security Code
- On-line or off-line verification is supported

### Trusted Ticket<sup>™</sup> Solution Benefits:

- Ticket Security Code ensures verifiable security of POS lottery tickets and receipts
- Ticket Security Code verification function ensures ticket authenticity
- 'Black Box' solution requires only easy to implement, standard XML-RPC interface to Lottery Gaming System
- Changes to Lottery Gaming System are limited to Szrek2Solutions interface
- Minimal changes are required to POS terminals short and long-term benefit
- High speed digital signature generation upholds high response time
- Ticket time-stamp preserves the time of transaction
- Standard cryptographic functions are used no proprietary algorithms
- Solution offers ticket protection against external and insider fraud
- Trusted Ticket uses already field proven Trusted Play and Trusted Audit technology

Trusted Ticket can be offered together with Trusted Transaction<sup>™</sup> solution, which allows leveraging the solution components: no additional hardware is required for Trusted Ticket rather the RNG server can cohost Trusted Transaction and Trusted Ticket applications and same HSM pair can be used for time stamping of transaction data and Ticket Security Code generation. Trusted Audit server and Trusted Monitor server provides functionality for both solutions.

Trusted Transaction integration with Lottery Gaming System needs to be performed only once and serve both solutions Trusted Transaction and Trusted Ticket. Furthermore, both solutions can use the same transaction to transmit wager data to the Trusted Transaction/Ticket Server, benefiting the performance and simplifying the solution architecture.

Existing Trusted Audit and Monitor functionality would be customized for particular lottery / operator to allow a specific ticket format verification and can be further augmented with functions to ease ticket verification (e.g. via barcode scanning to enter ticket data).

