

CaSecReporting is a reporting system arranged in levels encompassing the life-cycle evaluation of single slot machines, slot clusters and the entire floor. Key figures and intuitive status lights provide information at a glance on potentially security-relevant incidents throughout the reporting period. A special daily report available at a single click not only provides a quick summary to general- and slot-manager.

CaSecReporting uses data provided by the online gaming system. Security-relevant information is determined by means of key figures and statistical-mathematical calculations. These are based on meter increments calculated for a defined time frame – usually a gaming day. Hence, *CaSecReporting* periodically generates security reports based on the floor's gaming data. These reports are also suitable for managers, giving intuitive status lights and information filtering through various report levels make them easy to read and understand.

Objectives: Live-cycle-oriented security

CaSec improves the security of slot machine gaming. To do so a huge amount of process data originating from gaming devices must be processed and made comprehensible. This is achieved by key figures providing an insight into the gaming operation. These key figures allow long-term evaluations of the winnings of individual slot machines. In addition, a range of expected values calculated by CaSec further supports the evaluation process.

Reader's attention is directed to where it is needed. This makes the daily business and slot management more practicable and time-saving.

CaSecReporting supports integration of the security reports into an ISMS (Information Security Management System) – for instance according to ISO/IEC 27001. This is a convenient way to further increase security and profitability.

CaSecReporting at a glance

CaSecReporting is a flexible and interactive security system for the gaming floor. It allows clustering, adjustable warning and alert thresholds as well as status lights in order to direct the reader's attention. The reporting system can be easily customised to the needs of the casino. It comprises reports with different levels of detail, tailored to different requirements. *CaSecReporting* is a widely automated tool and hence cost efficient. The period- and lifecycle-oriented security analysis based on daily values and figures is the systems basis.

Integration of CaSecReporting in the casino's security processes

CaSecReporting integrates itself seamlessly in the casino's security processes. It helps to identify security-relevant incidents and supports organising the necessary activities and security actions of the persons to be involved.

Reporting arranged in levels with status lights for directing the attention

CaSecReporting is split into several report levels to safeguard management-oriented security reporting. The floor report forms the top level: it conveys a first impression of the floor's overall situation using important key figures. The cluster report forms the second level: it is focused on gaming clusters and jackpot systems. On the third level the slot machine report provides a comprehensive survey of a slot machine's winnings determination throughout its life-cycle. This structure allows in combination with the current reporting period's key figures a rapid evaluation of the gaming device's security and profitability.

Security tests are conducted for each single slot machine and for each reporting period. Besides, a concise slot machine balance sheet is provided. In particular, the tests help to find hints of potential manipulations. These pieces of information can be joined with information from other security systems for clarification. The reports contain context-related help texts to better interpret the test results and warning notices. Specific security actions to be taken can be described in *CaSecReporting*. This helps to establish an interface to the ISMS, if existing.

CaSecLive as an extension

CaSecLive processes and prepares the slot machine data supplied by the online gaming system promptly to allow "live"-monitoring over the course of gaming activity. Furthermore, meter rollovers and meter increments are documented.

Features at a glance

CaSecReporting

- ❑ Determination of a range of expected values by means of statistical calculations
- ❑ Life-cycle evaluation of each slot machine through key figures
- ❑ Gaming devices can be grouped to clusters (e.g. jackpot systems, gaming systems)
- ❑ A daily report available at a single click provides a quick summary of each reporting period
- ❑ Status lights simplify recognition and target-oriented examination of security-relevant incidents
- ❑ CaSec runs in a cost-efficient, automated manner
- ❑ The security reports are provided through Web-technology accessible from any location

- ❑ Daily updates of the pay-out ratio's middle- and long-term development, presented via a graph and hence easy to interpret
- ❑ If a pay-out ratio value exceeding the thresholds is detected, the status lights are set accordingly (dependant on a negative GGR)

Comparison of key figures

- ❑ Key figures are also reported as numbers
 - ❑ Pay-out ratio (PR)
 - ❑ Number of games
 - ❑ Gross gaming revenue (GGR, meter based)
 - ❑ Deviations

Configuration and security management



- ❑ Continuous comparison of the "theoretical" pay-out ratio and the actual pay-out ratio
- ❑ Comparison of the meter-based GGR and the transaction-based GGR (count), deviations are reported
- ❑ Deviations are measured and reported
- ❑ The number of games is measured throughout the whole life-cycle as well as for certain periods and reported

Configuration data and security tests

- ❑ Denomination
- ❑ Jackpot integration
- ❑ Pay-out ratio settings
- ❑ RAM-Clears
- ❑ Latest system change
- ❑ Latest jackpot hits
- ❑ Meter comparison, outlier tests, etc.

- ❑ Definition of the gaming floor
- ❑ Definition of slot machine clusters
- ❑ Definition of gaming clusters and systems for security monitoring
- ❑ Configuration of the test method sensitivities (for a single gaming device or a gaming device group)
- ❑ Parameterisation of the statistical-mathematical analyses (for a single gaming device or a gaming device group)
- ❑ Adjustment of alert thresholds (for a single gaming device or a gaming device group)
- ❑ Controlling of the provision of information

Monitoring of the winnings

- ❑ Cumulate, meter-based evaluation of the winnings on the basis of the pay-out ratio
- ❑ The pay-out ratio is measured in relation to the corresponding life-cycle of the slot/the cluster and a range of expected values is calculated
- ❑ Deviations from the expected values are determined by way of statistical methods, whereby warnings will be issued

Security reports

- ❑ Floor report
 - ❑ Aggregated presentation of all slots
 - ❑ Operational and configuration data of the clusters
 - ❑ Operational data of the floor in total
 - ❑ Information on the floor's profitability with periodical calculation of the yield
- ❑ Cluster report
 - ❑ Evaluation of slot machine groups
 - ❑ Evaluation of progressive Jackpots
 - ❑ Calculation of aggregated single slot data
- ❑ Slot machine report
 - ❑ Deviation analysis of the winnings (visualised using a graph in comparison to the actual pay-out ratio)
 - ❑ Presentation of the most important operational data
 - ❑ Configuration data as support to interpretation
 - ❑ Tests and checks related to damage scenarios