

Remote gaming submission requirements (Information for applicants)

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Revision summary:

Changed contact and locations data (Poljanska 71b to Mašera-Spasićeva ulica 10).

1 Application / submission form (WN121)

To initiate a testing / certification procedure for a gaming device with SIQ Ljubljana (from here on: SIQ), preferably the form WN121 (Application for testing / certification of gaming products) shall be used. Other forms can be used, providing that all information as requested in WN121 is covered. Latest issue of WN121 is always available on SIQ website, or upon request.

Equivalent to submitting the form WN121 on paper is filling in the online application form on SIQ Customer portal. Access to the portal is available to SIQ customers on request (please ask any of the SIQ gaming department personnel).

The applicant commits to complete functional identity of the supplied hardware and software to the supplied documented specification, and declares possession of copyright for all submitted items, including software source code.

The person signing the application form WN121 must be duly authorized to sign it.

1.1 Applicant, manufacturer

Besides the full name of the company (applicant) and address of the company seat, the registration number of the company's register (in many cases court register) shall be given. See Chapter 1 of WN121. An excerpt from the company's (or court) register shall be enclosed as well, if this is the applicant's first application, or if the registration has been changed in any way. This registry is known under various names in different countries, e.g.:

- UK: *Excerpt from the Company's register, or Excerpt from the court register*
- Austria, Germany, Switzerland: *Auszug aus dem Handelsregister*
- France, Belgium: *Immatriculation au Registre du Commerce et des Sociétés*
- Italy: *Infomazioni reperite presso la camere di commercio*
- Slovenia: *Izpis iz sodnega registra*
- Croatia: *Izvadak iz registra Trgovačkog suda*

All contact persons, authorized by the applicant, who may be informed about the testing process and may participate in it and provide information necessary by the laboratory, shall be listed. If other authorized personnel are to be involved at later stages of the process, a written authorization from the applicant shall be required.

Applicant is in most cases also the gaming machine manufacturer. If the applicant is NOT the gaming machine manufacturer, its relation towards the manufacturer shall be specified, e.g. regional or local sales office or local representative, distributor, etc. See Chapter 2 of the WN121. The applicant shall then enclose:

- manufacturer's written and duly signed authorization to carry out testing or certification in manufacturer's name and behalf;
- the full name of the holder of certificate which shall appear on the test report / certificate, e.g., the manufacturer name or the representative name;
- a separate manufacturer statement concerning functional identity of the gaming device with the documented specification, as well as the transfer of the copyright of the software (we will provide a form for this, WN116).

If software is developed and manufactured by a manufacturer other than the gaming machine (hardware) manufacturer, then a separate application form WN121 for software shall be submitted by the software manufacturer, or the applicant shall also attach:

- a separate software manufacturer statement concerning functional identity of the gaming device with the documented specification, as well as the transfer of the copyright of the software (we will provide a form for this, WN116),
- an excerpt from the company's register for the software manufacturer.

1.2 Short product description

Basic characteristics of the remote gaming system and its main components submitted for testing / certification shall be given. For example, if only games are submitted, the relevant remote gaming system for which games are intended shall also be mentioned. If more than one gaming system or game is applied for, all of them shall be listed. For details on what is required, see Chapter 3 of the application form WN121.

1.2.1 Software notes

All software elements that are subject to testing or certification should be listed in the application form (WN121) or in the attached documents. Only the listed software elements will be specified in the test report and / or certificate of conformity.

1.2.2 Communication protocols

Any supported communication protocols for connection to the on-line / supervisory information / accounting systems or to other systems or devices shall be listed in the application form WN121, or in the included documentation.

2 Submission Requirements

2.1 General submission requirements

- fully functional sample of the system,
- user (operating) manual,
- technical description of the system,
- support for: installation, maintenance and troubleshooting,
- block diagrams of the system,
- third party item manuals (e.g. external clock system, UPS, Switches, Firewall, etc.).

2.2 Game submission requirements; for each submitted game following documents shall be available:

- detailed game description with playing rules, including bonus games,
- game setup information,
- description of symbols, e.g. virtual reel layout, cards in a deck, number of decks used in the game, including what conditions need to be met for the deck(s) to be reshuffled, etc.,
- full pay table or win table, stakes or odds on betting games,
- excel or other file with winning probability calculations,
- for bonus games, winning probability calculation formulas, including probability calculation for entering bonus game
- pictures of artwork shall be provided.

2.3 Software/system submission requirements

- complete development environment (PC or virtual machine, e.g. VMWare, Virtual PC, VirtualBox, etc.),
- complete source code and executable files,
- network equipment settings description,
- system security documentation,
- account management documentation (administrator/operator, player – authentication and authorization),
- complete documentation of system functionality (reference where individual functionality of the system is implemented in the source code/system),
- complete system flowchart(s), including boot sequence, player sessions, player account management, main loop, bonus/gamble games, AutoPlay, log writing, error handling, and communication with On-Line system (if implemented),

- detailed description of database structure and store procedures/source code in database (if applicable).

2.4 RNG documentation, including:

- randomness principle,
- source code listing with comments,
- conversion principle from random number to game outcome.
- seeding mechanism
- All major algorithm and data structure descriptions, including pay table, bonus/gamble game implementation, reels symbol sequences, etc.,
- Game rules for the player, including bonus/gamble game rules.
- If the software accesses any external code, such as external libraries, database, operating system files (e.g. Registry), etc., this functionality must be fully documented.

3 Brief description of the testing procedure

Gaming test procedure is roughly divided into the following segments: functional tests; randomness of draw; payback ratio (return to player, RTP); software analysis.

3.1 Functional tests

The complete functionality of the remote gaming system or game is examined by performing functional tests. Functional tests typically include the following:

- verifying protection of unauthorized access to the remote gaming system (login access to components, connections, gaming device settings, etc.);
- evaluating all applicable electronic meters;
- evaluating all critical settings that influence the behaviour of the remote gaming system or game;
- examining the behaviour of the remote gaming system or game in some specific situations according to the jurisdiction (e.g. loss of communications, etc.);
- reporting all the required events and meters to an online accounting, payment, progressive or other systems (if applicable).

Additional tests are performed in accordance with specific jurisdictional requirements.

3.2 Randomness of draw

For testing of randomness, the laboratory needs a possibility to collect a large number of RNG or game outcomes. After the RNG results are collected in a file, a statistical analysis according to the regulation and/or to SIQ internal procedure is performed.

3.3 Payback ratio

The payback ratio tests can be performed in the following ways:

- mathematical calculation of the game (depends on the type and rules of the game),
- automated playing of the games,
- emulating / simulating the game or part of the game, using applicant's or SIQ's custom made software.

The first of the above options is usually the fastest.

Along with the payback ratio tests, game graphics, help screens, and player interface are also evaluated.

3.4 Software analysis

Initially, a detailed overview of the remote gaming system is performed. This involves general understanding of the organization of the source code, implementation of the: RNG, payable, game loop, the compile/build process, emulator use, etc.

The goal is, that SIQ understands the functionalities and location of critical components in the source code and is able to reproduce binary files from source code before the actual review of the sources. This may be achieved in one of three ways:

- SIQ engineer visits product manufacturers engineers,
- manufacturer or applicant competent personnel visits SIQ,
- remote introduction to the product (conference calls, Skype, TeamViewer or other).

A testing environment shall be available to SIQ for functional product testing. Such environment may be virtual and located at applicants (or other) premises. SIQ shall have full remote access to this testing environment. SIQ shall be given a possibility to compile all source code written by applicant or its contractors, to ensure authenticity of binaries / executable files. Compile process may take place locally (at SIQ) or remotely under full SIQ control / supervision.

Upon completion of the software analysis, the source code (and potentially any other sensitive data) is stored in a special safe deposit box and/or in a separate room with special key and alarm code.

4 Non-gaming tests (e.g. ISO27001 compliance, penetration tests, vulnerability assessment, business continuity)

For jurisdictions where only gaming tests are specified in the gaming regulations, SIQ will only perform gaming tests. For jurisdictions where also non-gaming tests are specified within the gaming regulation, the applicant has an option to:

- order these tests / audits to be performed by SIQ (this may involve separate, non-gaming related SIQ departments), or
- order SIQ test / audit reports containing a comment, that SIQ does not cover these requirements, or
- provide the applicable test / audit reports, to be reviewed by SIQ (subject to certain conditions, such as validity of test / audit reports and specific jurisdictional requirements).

The above choice is reflected on the application form WN121.

5 Confidentiality of information

SIQ warrants complete confidentiality of all sensitive information disclosed to it for the purpose of testing, as agreed within a separately signed NDA. SIQ offers a generic form of NDA, which may further be adapted by the applicant (in agreement with SIQ) to serve applicant's particular needs.

6 Location and contact data

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All testing services are performed at the above listed location, except services performed at the premises of the customer (upon individual arrangement) and services performed by the subcontracted laboratories. In certain special cases, testing services may be performed at the locations of the subsidiary companies of SIQ Ljubljana.