

## Gaming Machine Testing Strategy for Categories A & B1, B2, B3 & B4, C & D, Server Networked and Downloadable, Cashless Payment, Linked Progressives and Wireless Networks

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### 1 Introduction

- 1.1 Sections 96 and 97 of the Gambling Act 2005 (the Act) enable the Gambling Commission (the Commission) to set technical standards for gaming machines and gambling software respectively, to make arrangements for the administration of tests of compliance with standards and to provide for the enforcement of standards and submission to tests by attaching conditions to operating licences. Condition 2 of the Commission's *Licence Conditions and Codes of Practice (LCCP June 2007)* requires gambling software and gaming machine technical licensees to comply with the Commission's technical standards and with requirements set by the Commission relating to the timing and procedures for testing.
- 1.2 This document sets out the testing requirements for each set of standards. This includes who can test against the standards, what will need to be tested and the deadlines for testing. It discusses the testing strategy for assessing compliance with the machine standards for categories A & B1, B2, B3, B4, C & D, Server Networked and Downloadable games, Cashless Payment machine systems, Linked Progressives and Wireless Networks published on 1 June 2007. It also covers the B3A standard (which is yet to be published), system integration testing and commercial site testing. Its publication follows discussions with industry representative bodies, operators and test houses on the Commission's proposed approach.
- 1.3 The Commission is aware that testing cannot be completed prior to release for new gaming machines coming on to the market in the first few months without causing substantial delays. This has been taken into account in this strategy.
- 1.4 The Commission has published separately the implementation annexes for each category of gaming machine, setting out the timetable for compliance. This document should be read alongside the corresponding implementation annexes.

### 2 Machine standards categories A & B1 and B2

- 2.1 Category A & B1 and B2 game titles manufactured from 1 September 2007 will be required to be tested against all sections of the applicable standard, and relevant regulatory requirements in force at the time of testing, by a Commission approved third party test house.

Such tests may be carried out retrospectively for game titles manufactured prior to 1 September 2008 (after the machine has been supplied into the market) provided that the required testing has been completed by 31 August 2008. Manufacturers should ensure that machines supplied into the market prior to testing comply with the standards as far as possible, although the Commission recognises that there may be elements of some machines that are not fully compliant until the machine has been retrospectively modified.

- 2.2** Manufacturers may opt to have their game titles tested against the regulations that will be in force at 1 September 2008 if they choose to do so. Where any regulation has not come into force at the time the machine is tested the Commission would not require it be retrospectively re-tested, subject to section 12 (Change controls), unless any non-compliance issue(s) are identified (where the modification is required to comply with regulations).
- 2.3** Game titles manufactured from 1 September 2008 will be required to be tested by a Commission approved third party test house prior to being commercially exploited subject to section 11 (site testing for commercial purposes).
- 2.4** The Commission does not intend to test retrospectively any category A & B1 and B2 game titles manufactured, or machines converted, before 1 September 2007, including those subsequently modified to comply with the applicable technical standard and/or regulations unless any non-compliance issue(s) are identified, in which case the Commission, on a risk assessment basis, may require that the machine be tested by a Commission approved third party test house.

### **3 Machine standards category B3**

- 3.1** Category B3 game titles manufactured from 1 September 2007 will be required to be tested against the sections of the applicable standard and relevant regulatory requirements in force at the time of testing by a Commission approved third party test house. Such tests may be carried out retrospectively for machines manufactured prior to 1 September 2008 (after the game titles has been supplied into the market) provided that all reasonable steps have been taken to ensure that the game title complies with the applicable standard and relevant regulations and the required testing has been completed by 31 August 2008.
- 3.2** Manufacturers may opt to have their game titles tested against the standards and regulations that will be in force at 1 September 2008 if they choose to do so. Where any sections of the standards or regulations have not come into force at the time the game title is tested the Commission would not require it be retrospectively re-tested, subject to section 12 (Change controls), unless any non-compliance issue(s) are identified (where the modification is required to comply with regulations). Game titles that comply with the Commission's standards in force at the time of manufacture (for those manufactured between 1 September 2007 and 31 August 2008) do not have to be modified to comply with those standards that come into force on 1 September 2008.
- 3.3** Game titles manufactured from 1 September 2008 will be required to be tested by a Commission approved third party test house prior to being commercially exploited subject to section 11 (site testing for commercial purposes).
- 3.4** The Commission does not intend to test retrospectively any category B3 game titles manufactured or machines converted before 1 September 2007 that comply with the new or legacy standards. This includes game titles or machines subsequently modified to comply with the applicable technical standard and regulations that come into force later (between 1 September 2007 and 31 August 2008) unless any non-compliance issue(s) are identified, in which case the Commission, on a risk assessment basis, may require that the machine be tested by a Commission approved third party test house.

- 3.5** “Legacy machines” may continue to be operated indefinitely provided that where adapted to comply with any regulatory or other legislative requirements they continue to comply with the Commission’s legacy standard. The Commission does not intend to test retrospectively such machines. Where a legacy machine is modified after 1 September 2007 such that it no longer complies with the legacy standards it will be treated as being manufactured after 31 August 2007 and will be subject to the applicable technical and test requirements.

## **4 Machine standards category B3A**

- 4.1** Category B3A game titles manufactured and supplied from the incept date of the B3A technical standard will be required to be tested against all sections of that standard and relevant regulatory requirements in force at the time of testing by a Commission approved third party test house. Such tests may be carried out retrospectively for game titles manufactured up to one year after the game title has been supplied into the market provided that the required testing has been completed within 12 months following the incept date of the technical standard.
- 4.2** Game titles manufactured 12 months after the incept of the technical standard will be required to be third party tested by a Commission approved third party test house prior to being commercial exploited, subject to section 11 (site testing for commercial purposes).
- 4.3** Manufacturers may opt to have their game titles tested against the regulations that will be in force at 1 September 2008 if they choose to do so. Where any regulation has not come into force at the time the game title is tested the Commission would not require it be retrospectively re-tested, subject to section 12 (change controls), unless any non-compliance issue(s) are identified (where the modification is required to comply with regulations)..
- 4.4** The Commission does not intend to test retrospectively category B3A game titles manufactured and supplied before the incept date of the B3A technical standard, including those subsequently modified to comply with the applicable standard and/or regulations unless any non-compliance issue(s) are identified whereby the Commission, on a risk assessment basis, may request that the game title be tested by a Commission approved third party test house.

## **5 Machine standards category B4**

- 5.1** The Commission considers that category B4 machines should be tested in the same way as category B3 machines. However, the Commission has received a last minute request to re-consider this view and treat B4 machines in the same way as C and D machines. The Commission expects to be sent the detail to support this request shortly and will set out the testing arrangements for category B4 machines in due course.

## **6 Machine standards category C & D**

- 6.1** Category C & D game titles manufactured from 1 September 2007 can be tested against the sections of the applicable standard and relevant regulatory requirements in force at the time of testing by a Commission approved third party test house (in the same fashion as for category A and B game titles) or by the manufacturer where they are able to provide assurance of independence between the testing function and commercial operation and comply with sections 9.4 – 9.6 (testing conducted by licensee/ operator). Such tests may be carried out retrospectively for machines manufactured prior to 1 September 2008 (after the game titles have been supplied into the market) provided that all reasonable steps have been taken to ensure that the game title complies with the applicable standard and relevant regulations and that the required testing has been completed by 31 August 2008.

- 6.2** Manufacturers may opt to have their game titles tested against the standards and regulations that will be in force at 1 September 2008 if they choose to do so. Where any section of the standards or regulations have not come into force at the time the game title is tested the Commission would not require it be retrospectively re-tested, subject to section 12 (change controls), unless any non-compliance issue(s) are identified (where the modification is required to comply with regulations). Game titles that comply with the Commission's standards in force at the time of manufacture (for those manufactured between 1 September 2007 and 31 August 2008) do not have to be modified to comply with those standards that come into force on 1 September 2008.
- 6.3** Where the manufacturer opts to test and approve game titles in-house they will be required to have one game title (of a machine type) tested by a Commission approved third party test house within a 12 to 24 months period at the Commission's discretion. The Commission will decide on the frequency of test for each operator based on our compliance risk assessment programme. The term "machine type" refers to the machine's architecture and configuration and where significantly different to other products manufactured it would be considered a machine type in its own right. Where any non-compliance issues arise the Commission may require that further game titles be tested by a Commission approved third party test house on a risk assessment basis.
- 6.4** In instances where a game title had already been tested by a Commission approved third party test house the Commission would not require that it be re-tested unless any non-compliance issues are identified.
- 6.5** The Commission does not intend to test retrospectively any category C and D game titles manufactured or machines converted before 1 September 2007 that comply with the new or legacy standards. This includes game titles or machines subsequently modified to comply with the applicable technical standard and regulations that come into force later (between 1 September 2007 and 31 August 2008) unless any non-compliance issue(s) are identified, in which case the Commission, on a risk assessment basis, may request that the machine be tested by a Commission approved third party test house.
- 6.6** "Legacy machines" may continue to be operated indefinitely provided that where adapted to comply with any regulatory or other legislative requirements they continue to comply with the Commission's legacy standard. The Commission does not intend to test retrospectively such machines. Where a legacy machine is modified after 1 September 2007 such that it no longer complies with the legacy standards it will be treated as being manufactured after 31 August 2007 and will be subject to the applicable technical and test requirements.

## **7 Machine standards category server networked and downloadable, cashless payment machine systems, linked progressives and wireless networks**

- 7.1** Equipment of the above categories manufactured from 1 September 2007 will be required to be tested against the sections of the applicable standard by a Commission approved third party test house. Such tests may be carried out retrospectively for equipment manufactured prior to 1 September 2008 (after the equipment has been supplied into the market) provided that all reasonable steps have been taken to ensure that the game title complies with the applicable standard and relevant regulations and that the required testing has been completed by 31 August 2008. Provided that the system (which has been tested) is not modified then it will not be a requirement for such tests to be repeated when used for different applications. The Commission is still considering testing arrangements for downloadable gaming systems where components manufactured by different entities are subsequently integrated (see system integration testing section below).

## 8 System integration testing

- 8.1 The Commission is still considering the appropriate testing arrangements where components such as the player terminal, RNG or game system are purchased separately and integrated by the end user or supplier. Examples of this arrangement are existing fixed odds betting terminals where the random number generator is separate to the terminal and terminals where games from different suppliers are loaded by the end user, supplier or operator.

## 9 Procedure for testing

### Third party test houses

- 9.1 In June 2007 the Commission published a list of test houses that are approved to test gaming machines against its technical standards. The list, which can be found on the Commission's website at [www.gamblingcommission.gov.uk](http://www.gamblingcommission.gov.uk), will be updated as new test houses are approved.
- 9.2 Licensees must send to the Commission on completion of satisfactory testing (but prior to release) the results of testing (ie a test house's summary report). Where practicable the Commission is content to receive this directly from the test house. Once this has been provided, the successfully tested product can be commercially exploited, subject to section 11 (site testing for commercial purposes).
- 9.3 Licensees on request will need to make available to the Commission the full test results supplied by the approved third party test house. Where practicable the Commission is content to receive this directly from the test house.

### Testing conducted by licensee/operator

- 9.4 To be permitted to carry out their own testing of gambling products the licensee should follow good practice in the development and testing cycle for gaming machines. Examples of what the Commission considers to be good practice can be found in section 10 below. Manufacturers can depart from the good practice set out in section 10, but must be able to demonstrate as to how their alternative procedures mitigate the risks associated with software development, implementation and testing procedures.
- 9.5 The Commission, on request or as part of a compliance visit, may require evidence from the licensee that it follows good practice and may inspect any documentation relating to the development and testing of any game title manufactured after 31 August 2007.
- 9.6 All results from licensee testing should be retained for 10 years after the final production of a game title and be made available to the Commission during compliance visits or on request. A summary of each game title approved in-house should be submitted to the Commission. The summary should include the game title, version number and confirmation that good practice procedures for development and testing are in place and that the standards and relevant DCMS regulations have been complied with. This must be signed as being the case by a Personal Management Licence (PML) holder or an appropriate company director in the case of a small scale operator (where there is no PML holder).

## 10 In-house development, testing and release – examples of good practice

- 10.1 Examples of good practice gaming machine and gambling software development are set out as follows.

## **10.2** Development process.

- Master source code should be held securely (such that the source cannot be tampered with by unauthorised persons).
- An audit log of all accesses to master source code should be maintained.
- Old versions of source code and the dates they were retired should be retained for 10 years.
- Access to source code by developers should be well controlled and based on a minimum access required for the job approach.
- Access to platform source code should not be granted to those working only on game specific development.
- Changes to critical modules must be logged and should be peer reviewed by an appropriately skilled independent person (who can be from the same company) to ensure all changes made are appropriate and in line with the change documentation. Any suspicious or unauthorised changes must be explained.

## **10.3** Testing Process.

- Logically separate development and testing environments should be adapted.
- Separate staff to those that developed should perform the testing.
- An independent assessment of changes made by the developers should be performed (this can be performed by someone from the same company) to verify all changes are documented in the change documentation. This may involve the use of file comparison programs to quickly identify all changes.

# **11 Site testing for commercial purposes**

## **11.1** Commercial site testing of game titles prior to them being formally tested is permitted providing the following is adhered to:

- the manufacturer must follow good practice (examples are given above in section 10) in the development and approval of games for commercial site testing and take all reasonable steps to ensure that any test machine complies with applicable technical standards and regulations in force at the time it is manufactured;
- a maximum of 50 machines may be site tested;
- the testing must last no longer than sixteen weeks (taken from the date the first machine of that title is sited);
- the machines must be clearly identified as being on a commercial site test; and
- the entity responsible for the test machine must also keep adequate records of the above, the site locations for inspection purposes and any modification made as a result of non-compliance with standards or regulations.

## **11.2** The Commission will keep commercial site testing under review and will amend these arrangements if necessary.

# **12 Change controls**

## **12.1** Where a gaming machine's hardware or software is modified such that it could potentially affect the fairness of the game (eg pay-tables or game personality) or randomness (where applicable) then it must be resubmitted for testing to ensure compliance. Otherwise the machine need not be re-tested but any modification to hardware or software must be documented and signed as being compliant with the Commission's requirements by a PML holder or a company director in the case of a small scale operator.

## **12.2** Where the manufacturer tests the machine internally they must ensure that all reasonable steps are taken to ensure continued compliance with the technical standards and/or regulations.

**12.3** Updated game version numbers must be submitted to the Commission and referenced against an existing game title prior to its release. Documentation relating to sections 12.1 and 12.2 above must be retained for a minimum of 10 years.

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The Gambling Commission regulates gambling in the public interest. It does so by keeping crime out of gambling, by ensuring that gambling is conducted fairly and openly, and by protecting children and vulnerable people from being harmed or exploited by gambling. The Commission also provides independent advice to government on gambling in Britain.

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