Recipient:

«Company»
«Name»
«Address»
«Email»

Request for commercial proposals for test material for HbbTV 2.0

The HbbTV Association invites proposals (the "Proposals") from potential suppliers ("Suppliers") for the test material test suite used to validate implementations of HbbTV in TVs and STBs as specified in the attached Request for Proposals (the "RfP").

The requested test material corresponds to that found in country and platform-specific test suites which either 1) relates to DRM or 2) has been identified as filling gaps in the HbbTV test suite and is not, in fact, country or platform-specific.

The test materials are to be included in the HbbTV Test Suite and made available to implementers as part of licensing that test suite.

The content and structure of the Proposal shall follow the guidance given in the RfP. Details of how to submit your Proposal and the deadline for submission are given in the RfP.

The HbbTV Association prefers proposals for re-use of existing, mature, debugged test material rather than the creation of new test material. The latter, however, will be considered where there is no reasonable proposal for re-use of existing test material.

Suppliers should note the requirement to submit Proposals for test material in the format set out in Annex 1 of the RfP.

Any Supplier appointment shall be subject to the negotiation and completion of a new HbbTV V3 Test Material Provider and Distribution Agreement (Commercial).

HbbTV reserves the right to appoint any number of Suppliers or may decide to appoint no Suppliers at all in respect of this RfP. Where necessary, HbbTV may enter into several agreements with the same Supplier in respect of different test materials or sets of test materials delivered under different terms and conditions.

Dated this September 26th 2024

Signed by

Vincent Grivet
(no signature – electronic delivery)
For and on behalf of the HbbTV Association
Attachment: HbbTV UNIT TESTS FOR DRM AND FILLING GAPS

Request for Proposals for Test Material

HbbTV UNIT TESTS FOR DRM AND FILLING GAPS

1. Scope of the RfP

Proposals are invited for the supply of test material corresponding to the test assertions specified in Annex 2 to this RfP.

The HbbTV Association prefers proposals for re-use of existing, mature, debugged tests that HbbTV implementers may already be familiar with - rather than the creation of new tests. The latter, however, will be considered if there is no reasonable proposal for re-use of existing test material.

- Proposals for re-use of existing test material shall include the following;
    - Reacting to review comments from HbbTV members, perhaps iteratively. This may involve changes to the tests or to the supporting documentation.
- Proposals for development of new tests shall include the following;
    - the creation and/or update of test implementations to meet the test assertions included in Annex 2
    - maintenance and support of the delivered test material during test acceptance, during the warranty period.
- Proposals for DRM tests (whether new or pre-existing) shall include the following;
    - The submission of a contribution to the HbbTV Test Specification on DRM and working with the members of the HbbTV Testing Group to ensure this is adequate to enable test harnesses from multiple suppliers to run the DRM tests.
    - A proposal for what should be done about DRM license servers.

HbbTV Association licenses or distributes the HbbTV Test Suite only to its member companies.

This RfP replaces any previous RfP referring to the same subject.

2. Guidance for Submission

1.1. Period of Validity

The Proposal shall be valid for a period of six months from the date of the Proposal.

1.2. Delivery of Proposal

The deadline for submitting a Proposal shall be at 4pm CET four weeks from the date on the accompanying letter to this RfP.

The Proposal shall be submitted by the deadline by email to the <testmaterialrfp@hbbtv.org> email address.

1.3. Further Information

Contract, administrative and technical queries should be sent to the <testmaterialrfp@hbbtv.org> email address.

Queries should be clearly marked as confidential if the Supplier wishes them to be treated as such.

Suppliers are allowed to send in questions related to RfP subjects within the first week from the date on the accompanying letter to this RfP. Anonymized responses to these questions will be provided by HbbTV within 10 working days to all Suppliers.

2. Requirements

The Suppliers and the Proposals must fulfil the following requirements:

2.1. Proposal Structure and Contents

Proposals shall follow the proposal structure and contents given in Annex 1.

3. Pricing

3.1. General

All pricing must be in Euros including all applicable fees and taxes.

In a departure from previous RfPs issued, HbbTV seeks outright ownership of all software developed resulting from this RfP specifically including newly developed test material. For changes to material derived from existing test material resulting from this RfP, the modifications to the derived material will be owned by HbbTV. Specifically;

- For test material created in response to this RfP, Suppliers will have the same right to use the test material as any other HbbTV member.
- For existing test material that is re-used, HbbTV is open to the original creator having additional rights.

HbbTV may divide any order resulting from this document between more than one Supplier. Proposals shall indicate if there is a minimum order size, either by value or by number of tests. One possible division would be to order package 1 from one Supplier and as much as possible of the remainder from another Supplier.

Prices quoted shall include coverage for warranty (see section 3.8).

Suppliers shall provide separate pricing and terms for support and maintenance (see section 3.9).

4. Test Material

Suppliers shall not charge any fee for test material supplied under an open-source license. However, Suppliers shall provide and may charge for coverage for warranty in this case.

Suppliers shall provide both of the following:

- Individual pricing for all packages they are willing and prepared to supply, so that HbbTV has the option of buying one or more packages from multiple Suppliers
- Pricing for sets of packages and supporting software and services where this provides some price advantage for HbbTV.

For each price above, the associated number of man hours required also shall be provided.

If the proposal is dependent on the delivery of any additional costed item, technology or resource that may be common to more than one test assertion, or more than one packages of assertions then that shall be listed and priced separately and in addition to the cost of the individual packages, i.e., such prices should not be apportioned across or subsumed within the prices of the individual packages.

4.1.   Characteristics of Test Material and Testing Approach Considerations

The test material, including the updated test definition XML file, shall be compliant with the requirements set out in the HbbTV Test Specification. It shall be possible to execute the test on a test harness that complies with the HbbTV Test Specification.

Supplier shall describe their approach to the considerations listed in Annex 4 including, but not limited to, any extensions required to the HbbTV Test Specification (see Annex 3). In some cases, this could be a description of how the tests running on the terminal will interact with the test harness and hence the functionality required to be provided by the test harness.

For all areas of testing, whilst not preferred, if the Supplier believes that the HbbTV Test Specification would need to be modified to enable the tests to be executed, such modifications should be stipulated in the Proposal. Supplier is responsible for any such extensions which must be approved by the HbbTV Testing Group prior to the submission of any affected test material. This must be done in sufficient detail to permit independent test harness implementations to include that extension to run the test material. Note section 4.1 of Annex 1.

Test material may need to contain components not originally developed by Supplier. In this case, any licensed components need to be identified to HbbTV if Supplier thinks that there may be a risk of leakage into components being delivered that could affect HbbTV's ability to license the test suite under its current model. In this situation, Supplier needs to contact HbbTV at the earliest opportunity to discuss practical ways forward.

To minimise HbbTV member resources needed to review test material, where one or more test cases have only small differences, Supplier should use the mechanism defined in clause 6.3.5.4 of the HbbTV Test Specification to indicate one or more test cases as being derived from other(s) and to indicate the differences.

Tests shall be constructed to enable the maximum possible automation of test execution and should be constructed to enable the automatic analysis of results at some later time.

This also applies to the case where tests are derived from existing tests where the existing test automation support is not as extensive as it could be. Where some improvements

could be made to the original test, Suppliers are encouraged to document this and provide to HbbTV. For example:

- Video assets should contain both QR codes and human readable timestamps, and readable (w,h) resolution information
- Different DASH representation distinguishing themselves with (for example) colour indicators in the same area of the display to allow automated analysis
- For audio samples, avoiding sample identification that requires specialist tester knowledge (for example, it isn't possible for all testers worldwide to be able to identify and differentiate between separate languages).
  - Further any signalling of this nature should be consistent with the content of components (e.g. a signalled component containing German spoken audio should be signalled as German not e.g. French).

If this requirement for automation conflicts with the requirement earlier in this clause to 'minimise HbbTV member resources needed to review test material', then those requirements of take precedence.

Further consideration should also be given to instructions for testers, which comprise a key part of the test material. Instructions and pass criteria should be clear and unambiguous and should not require any particular specialist knowledge on behalf of the tester – just the ability to follow instructions and interpret the pass criteria in the context of the test material.

4.2. Schedule

HbbTV Association expects groups of packages to be delivered in a staged manner and for all packages to have been delivered within 6 months of the contract date. The Proposal shall indicate:

- the month of delivery for each package counting from contract signature (more precision will be added during the contract negotiation with the selected supplier(s)), and
- any dependencies between packages.

In general, HbbTV prefers packages not be split across deliveries. However, Supplier should give a higher priority to getting a basic set of test material delivered and included in

the earliest possible release of the HbbTV Test Suite than getting a full set of test material delivered. If this requires splitting packages, then that can be considered.

If the delivery times of the packages would be different depending on whether the Supplier were the only one selected or whether the work was divided between more than one supplier, then the Proposal should state this and explain the differences.

A number of packages actually delivered by the Supplier in accordance with the contract on the same delivery date shall be treated as a group of packages.

HbbTV Association will carry out initial acceptance testing of each delivered package of test material within 8 weeks of the actual date of delivery. If HbbTV rejects any package, it shall notify Supplier of such rejection and Supplier must fix any errors notified to it and re-submit the package which has been rejected. Upon re-submission HbbTV will recommence initial acceptance testing which it will carry out within 8 weeks of the actual date of re-submission. Initial acceptance of any package or group of packages shall be notified to Supplier by HbbTV once HbbTV has completed initial acceptance testing in accordance with the Test Material Approval Process (see Annex 3). In the event that no such notification is made to Supplier within a period expiring 8 weeks following the delivery or re-submission of test material in a package or group of packages, then initial acceptance of that package or group of packages shall be deemed to have taken place. For the avoidance of doubt, where any package contained within a group of packages has been rejected, then initial acceptance of that group of packages shall not take place until the last rejected package in the group has been re-submitted and initial acceptance testing of that package has been successfully completed.

This paragraph shall apply to the payment to Supplier of any fees including any fee in respect of Supplier's warranty. Upon initial acceptance, Supplier may submit their invoice (minus a retention fee corresponding to 70% of the contracted amount) in respect of the initially accepted test materials. Full acceptance testing will follow the procedure set out in the Test Material Approval Process (see Annex 3). Before invoicing for the retention fee, Supplier shall produce a report listing any remaining unresolved test suite errors with the material being invoiced for and how Supplier plans to address those errors and agree this report with HbbTV. No retention fee shall be payable before this report has been agreed. The retention fee may be invoiced upon the earlier of final acceptance of all packages to be delivered by Supplier and the expiry of 6 calendar months following initial acceptance of the last package delivered by Supplier. In the latter case, no retention fee shall be payable

unless all test suite errors notified to the Supplier during the 5-month period following initial acceptance of the last package delivered by the Supplier have been fixed to the satisfaction of HbbTV.

4.3.   General expertise

Developing tests for a number of the packages will require specialised or scarce expertise. These are listed below:

DRM related packages will require expertise in DRM, MPEG DASH and the ISO base media (aka MP4) file format.

Proposals shall identify what, if any, expertise the Supplier has related to each of the above. If the Supplier does not yet have the needed expertise, then Proposals shall identify how the Supplier would address this to supply the package(s) concerned (e.g. hire, sub-contract, partner) including the lead time expected to put those arrangements in place.

HbbTV requires that the primary point of contact for project management and technical issues shall be located in Europe. Proposals shall identify the location from which these activities will be carried out and the names of those staff involved. There shall be no requirement for HbbTV (or company members representing HbbTV) to travel outside Europe for the purposes of this contract.

It is important that the Proposals indicate how they will manage continuity of staff and expertise over the period of time covering test material creation, warranty and maintenance.

Supplier shall indicate any staff overlap between this project and other work they are doing for the HbbTV Association during their development and delivery period.

4.4.   Warranty

HbbTV Association requires a warranty period starting from the submission date of the invoice relating to the final delivery of the first package until 12 months following the invoice relating to the final delivery of the last package. During this period, Suppliers shall provide updates to the test material if any test material is found to not satisfy the test assertion or be not in compliance with the HbbTV 2.0 Specification and/or DRM guidelines or otherwise not meet the requirements of the acceptance process, whether discovered during acceptance testing or via the Test Material Challenge Procedure (see Annex 3). During the warranty period Suppliers shall actively participate in any Test Challenges

relating to their test material and shall attend HbbTV organised Testing Events which take place on a quarterly basis. At the end of the warranty period, Supplier shall produce a report listing any remaining unresolved test suite errors with the material being, how it plans to address those errors and agree this report with HbbTV.

4.5.   Additional Duties of Suppliers

If Supplier is proposing DRM test material then Supplier shall include a description of how DRM license servers are currently provided and how they would propose them to be provided in the future. If Supplier is intending to charge HbbTV for this then proposed terms shall be provided.

Suppliers shall sign the Test Repository Access Agreement (included in Annex 3) if they have not already done so.

For newly developed test material,

Suppliers shall sign one or more agreements substantially in the form of the template HbbTV V3 Test Material Provider Agreement (Commercial) included in Annex 3 and subsequently comply with the terms of the relevant agreements.

For existing test material that is re-used, HbbTV and Supplier shall sign an agreement either derived from the template HbbTV V3 Test Material Provider Agreement (Commercial) included in Annex 3 or derived from an agreement proposed by Supplier or a change to a previously signed agreement.

All test material shall be submitted electronically directly to the Test Repository (using SVN).

Suppliers shall, at their own expense, participate in the test events organised by the HbbTV Testing Group to support the validation of their submitted test material.

4.6.   Maintenance

HbbTV Association requires the Supplier to provide pricing for a time and materials price for maintenance services. Suppliers will be expected to provide guaranteed response times for fixing issues found with any test material and otherwise supporting the Test Material Challenge Procedure (see Annex 3) as required. Suppliers will be expected to respond to questions concerning the test material.

For existing test material that is re-used, HbbTV would prefer the test material not diverge between the version used by Supplier and the version in the HbbTV test suite. Supplier shall propose how the maintenance and future evolution of this material would be handed including which issue tracker or issue trackers will be used and what approval process or processes will be used for revisions.

4.7.   Acceleration of initial acceptance

The following shall apply for newly developed test material;

HbbTV requests quotations that include the cost of having performed an additional independent review on the materials to be provided. Specifically, that Supplier would warrant that an independent review has been performed on all the submitted material sufficient to meet the requirements of Initial Acceptance as defined in the HbbTV Test Material Approval Procedure.

HbbTV makes no requirement on, nor makes any specific recommendations as to who would perform this independent review. If the reviewer is an internal employee of Supplier, then the proposal must describe the cleanroom principles that will be applied in order to ensure that the review is independent of the implementation.

If the reviewer is an external resource, then the proposal must indicate the capability and veracity of the resource being used.

In either case HbbTV would have no engagement with the reviewer. HbbTV expects to have visibility of the progress and results of the independent review. The details of this are left to Supplier and should be included in the proposal. An example would be to follow the same procedure as would be followed by a reviewer not connected to Suppler including the following;

- tests being uploaded to the HbbTV subversion repository before the start of the independent review and
- the independent reviewer reporting issues using HbbTV's Redmine issue tracking system and not Supplier's internal issue tracking system and
- the independent reviewer adding history items with type "rejected" to the test in the HbbTV subversion repository when rejecting a test case

For existing test materials that are re-used, HbbTV considers Initial Acceptance to be met by the QA processes used by the original sponsor of the test materials at the time they were created. No HbbTV-specific initial acceptance is required.

4.8. Acceleration of final commercial acceptance

HbbTV's goal is to accelerate achieving a set of tests that are high quality at the time of final commercial acceptance as defined in the HbbTV V3 Test Material Provider Agreement (Commercial). As part of this goal, HbbTV's preference is for all test materials to achieve final approval (as defined in the HbbTV Test Material Approval Procedure) after execution at a testing event rather than through the path of waiting 4 months since the test was TMAP reviewed.

The following shall apply for newly developed test material;

Supplier should explain how they would expect this to be achieved, what actions they would take and what actions that would (realistically) expect from others.

Suppliers may propose other additional paid work to accelerate final approval. Such additional work should be separately priced and the expected difference it would make to final approval described in significant detail.

For existing test materials that are re-used, final commercial acceptance will follow the HbbTV Test Material Approval Procedure. Supplier shall be explicit how comments and issues arising from reviews under this process will be resolved. Supplier should indicate in advance if, to the best of their knowledge, all tests within the test material have been successfully executed in at least one implementation.

4.9. Test Harness

Developing a test harness is outside the scope of this RfP, however to fulfil their obligations under this RfP the selected Supplier(s) will require access to a test harness possibly including the ability to modify it or have it modified. Proposals shall indicate how access to a test harness would be organised if the Proposal was accepted. Specifically:

   a) Supplier already has a test harness with the rights to modify it
   b) Supplier will partner with someone who has a test harness including the rights to modify it
   c) Supplier will buy a test harness and contract the supplier for modifications
   d) Supplier will develop a test harness themselves

e) Supplier will not require the ability to modify a test harness and has access to an existing test harness that will be able to execute tests developed during the course of this project

f) other (please explain).

In the case of options c) and d) above, the Proposal shall indicate how the cost of purchasing or developing the test harness is to be funded. Specifically, whether the Supplier is intending to fund this themselves (e.g., because they intend to offer a product or service based on it) or if the funding for this is to be paid for by HbbTV, either explicitly as an item in the Proposal or as an overhead on the price of the tests.

5. Appointment Process

The process of making any appointments of a Supplier or Suppliers is the following:

5.1.　　Evaluation and Appointment

Proposals will be opened and reviewed internally at the convenience of HbbTV Association. Within 6 weeks of the submission deadline, HbbTV Association will have completed a comparative assessment of received Proposals to make a decision as to which Proposals should be selected for further analysis and negotiation.

At the end of the analysis and negotiation phase, HbbTV Association will make a provisional appointment (the "Appointment"), at its entire discretion, of the Supplier or Suppliers who demonstrate the best ability to meet the requirements set out in this RfP to deliver the test material.

Proposals will be subject to a technical review and a commercial/business review:

- The significant factors for the technical review shall be the quality of the Proposal, how the supplier proposes to achieve a set of tests that are high quality at the time of final acceptance and the effort anticipated to be needed, both from the Supplier and from HbbTV Association, for the test material to pass through the HbbTV test material approval process and be released as part of an approved HbbTV Test Suite.
- The significant factors for the commercial/business review are the perceived ability and track record of the Supplier, the proposed delivery schedule, the price, the maintenance commitments for the test material after it has been released as part of

an HbbTV Test Suite and whether the submission is already in use in national markets.

None of these factors is decisive although submissions already in use in national markets will have a significant advantage. Proposals which score highly on one factor may be rejected due to scoring badly on another.

5.2. Clarification of Proposals / Changes to Process

Notwithstanding any other provision of this RfP, HbbTV Association reserves, at its entire discretion, the right to:

a. Conduct discussions with any or all potential Suppliers for the purpose of clarification of Proposals;
b. Waive, or decline to waive, any defect in any Proposal;
c. Accept, reject, or negotiate any or all Proposals or the terms of any Proposal for the purpose of obtaining the best and final offer;
d. Cancel or amend this RfP or issue other requests for proposals (and in doing so will endeavor to communicate transparently and in a timely manner with all Suppliers);
e. Request Suppliers submitting Proposals to resubmit Proposals with the pricing for different grouping of packages;
f. Provisionally appoint any number of Suppliers and complete more than one agreement with any one Supplier relating to different test materials and to complete agreements at different times for the purpose of expediting the delivery of test materials; and
g. Select no Proposals at all.

5.3. Negotiation and Execution of Agreements

Suppliers provisionally appointed shall execute the agreements as set out in section 3.8. In the event that there is negotiation and the appointed Supplier and HbbTV Association are not able to reach agreement and execute such agreements within 30 days of the Appointment, HbbTV Association may declare the Appointment void and may provisionally appoint another Supplier or Suppliers or issue a new RfP.

The following shall apply for newly developed test material;

The list of test materials which HbbTV has definitively agreed to obtain from the Supplier shall be the included as a schedule in one or more HbbTV V3 Test Material Provider Agreements (Commercial) entered into with the Supplier.

For existing test material that is re-used, the list of test material concerned will be included in the agreement between Supplier and HbbTV that may be derived from the HbbTV V3 Test Material Provider Agreements (Commercial). If a Supplier is selected for both some newly developed test material and some existing teat material, the existing test material may be addressed with an additional annex to the HbbTV V3 Test Material Provider Agreements (Commercial).

5.4.   Not Accepted Proposals

HbbTV Association has no duty to provide Suppliers with any explanation or justification of its decisions not to accept a Proposal or to accept a Proposal only in part.

6. Intellectual Property

The HbbTV Association retains the immaterial and property rights to all materials accompanying this RfP or materials made available separately by the HbbTV Association for the purpose of preparation of Proposals to this RfP. Nothing in this RfP gives recipients the right to use these materials for any purpose other than preparing Proposals to this RfP.

The following shall apply for newly developed test material;

HbbTV will own all the intellectual property in the test materials and documents developed as part of this project, subject to the provisions of the HbbTV V3 Test Material Provider Agreement (Commercial) and the Test Repository Access Agreement (see Annex 3).

For existing test material that is re-used, HbbTV would prefer unencumbered rights to distribute these tests to HbbTV members and to extend, modify and maintain these tests for use by HbbTV members. HbbTV is happy to consider joint ownership of the test materials concerned.

If any part of test materials is making use of any third-party intellectual property, it must be clearly identified and must follow that third party's intellectual property licensing requirements.

If any test materials contain open source components, this must be disclosed in the Proposal and will be subject to further negotiation.

7. Exclusion of liability / Costs

The test assertions, attached documents and other materials are supplied without any obligation or warranty from HbbTV Association. The HbbTV Association reserves the right to amend the test assertions during the present submission process.

The HbbTV Association has prepared this RfP in good faith with a particular interest for swift and cooperative progress in the development of the test material to be used to validate implementations of HbbTV in TVs and STBs. To the extent permitted by law, the HbbTV Association excludes any liability (whether in contract, tort, negligence or otherwise) for any incorrect or misleading information contained in this RfP.

Any costs or expenses incurred by any Supplier or other person under the present submission process will not be reimbursed by the HbbTV Association and neither the HbbTV Association nor any of its representatives will be liable in any way to any Supplier or other person for any costs, expenses or losses incurred by any Supplier or other person in connection with this RfP.

8. Confidentiality

Sections 1 to 8 of the Proposals may be shared with any member of the HbbTV Association. Sections 9 and 10 of the Proposals will only be shared with members who have been specifically tasked with considering the Proposals and will not be shared more widely.

The documentation as listed in Annex 3 is made available separately by the HbbTV Association on request and, where appropriate, as confidential materials under a separate NDA.

9. Applicable Law and Dispute Settlement

This present RfP, as well as subsequent negotiations shall in all respects be governed by and construed in accordance with Swiss law.

The present RfP must be regarded as a modality of a negotiation subject to the general rules of the Swiss Code of Obligations. Swiss law does not subject requests for proposals in the present context to any specific rules, such as e.g. public procurement rules, and HbbTV Association is entirely free to enter into contract with whatever Supplier it considers best suited for the awarded work. As a consequence, no claims can be brought against the HbbTV Association out of the present procedure. For all practical purposes, the following dispute settlement rules shall nevertheless apply:

All disputes arising out of or in connection with the present RfP shall be submitted, in the first instance, to the Dispute Adjudication Board ("DAB") in accordance with the Dispute Adjudication Board Rules of the International Chamber of Commerce (the "DAB Rules"), which are incorporated herein by reference.

The DAB shall consist of three (3) members to be appointed as follows: when a dispute arises that could not be amicably settled, each of the potential Supplier and HbbTV Association (each a "Party", collectively the "Parties") may send a written notice to the other Party requesting the establishment of the DAB. Each Party shall then within 10 business days appoint one independent DAB member who must have the following credentials: (i) be demonstrably experienced in the subject matter of the dispute, and (ii) be an employee or representative of a company that is a member of the HbbTV Association. The two appointed DAB members shall appoint, within 10 business days, the third independent DAB member, who shall act as chairman of the DAB.

The DAB procedure shall be purely private, and the parties shall not revert to the ICC Dispute Board Center. Problems arising from not having the support of the ICC Dispute Board Center shall be resolved ad hoc by the DAB.

For any given dispute, the DAB shall issue a decision in accordance with the DAB Rules and within a time period of 2 months. The deadlines for the various steps of the procedure shall be set (and if longer deadlines are mentioned in the DAB Rules be systematically reduced) to allow for a swift rendering of the decision of the DAB within the time limit of 2 months.

If (i) any Party fails to comply with a decision when required to do so pursuant to the DAB Rules, (ii) any Party sends a written notice to the other Party and to the DAB expressing its dissatisfaction with a decision, as provided in the DAB Rules, (iii) the DAB does not issue the decision within the time limit of 2 months, or (iv) if the DAB is disbanded pursuant to the DAB Rules, the dispute shall be finally resolved by arbitration in accordance with the

Swiss Rules of International Arbitration of the Swiss Chambers of Commerce (the "Swiss Rules") in force on the date when the notice of arbitration is submitted in accordance with these Swiss Rules. The number of arbitrators shall be one (1). The applicable procedure shall be the expedite procedure under Article 42 para 1 of the Swiss Rules (in particular: award to be made within six months). The seat of the arbitration shall be Geneva and the arbitral proceedings shall be conducted in English.

Each Party hereby: (i) irrevocably consents to the exclusive jurisdiction of such arbitral tribunal for the resolution of such disputes; (ii) irrevocably waives any objection that it may now or hereafter have to the venue of any such action or proceeding in such arbitral tribunal or to the convenience of conducting or pursuing any action or proceeding in such arbitral tribunal; and (iii) irrevocably waives any right to a trial by jury regarding the resolution of any dispute between the Parties hereto.

Neither the DAB procedure, nor the arbitration under the Swiss Rules oblige the HbbTV Association to suspend or abort its work on the submission, assessment and testing of test material.

Annex 1: Proposal Structure

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3.2.   Clearly identifying which of the tests contain open-source materials with an indication of the license terms

3.3.   Clearly identifying which of the tests make use existing test material which is in currently in use in national markets

3.4.   Where applicable, an indication of the licence terms the Supplier is proposing should apply to existing test material"

3.5.   Where applicable, details of the provision and operation of DRM license servers

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10. Supporting confidential information

Each section should start on a new page.

Section 10 should only be used for material that is clearly confidential. Use of section 10 for material that needs to be assessed by the HbbTV Testing Group may damage the chances of the Proposal being accepted.

Annex 2: List of Tests

This annex includes a list of tests (listed with their test ID and title) which are included in this RfP, broken down by package.

Package 1 – DRM Tests Common Between Italy and UK (10 tests)

#	IDs	Title	Assertion
1	uk.co.freeview_DASHDRM002 com.tivu_DASHDRM-HTML5-0023	PlayReady DRM license automatic post-acquisition	The terminal shall be able to automatically acquire a PlayReady licence when the play() method is called and no licence is available for the content
2	uk.co.freeview_DASHDRM004 com.tivu_DASHDRM-HTML5-0025	Playback errors when an invalid PlayReady licence is automatically acquired (invalid rights)	When an invalid PlayReady licence is acquired by the media player (invalid rights), the HTMLVideoElement shall generate an 'error' event and set its 'error' property to a MediaError object with code MEDIA_ERR_DECODE
3	uk.co.freeview_DASHDRM005 com.tivu_DASHDRM-HTML5-0026	Playback errors when no licence is available for the content and there is no way to acquire one	When no licence is available for content, an MPEG CENC ContentProtection element is present in the MPD and no ContentProtection element is present in the MPD for PlayReady, the HTMLVideoElement shall generate an 'error' event and set its 'error' property to a MediaError object with code MEDIA_ERR_DECODE
4	uk.co.freeview_DASHDRM006 com.tivu_DASHDRM-HTML5-0027	Support of live encrypted streaming with key rotation and dynamic MPD	The PlayReady terminal shall correctly decode and display AV content from a DASH encrypted stream with multiple Periods and dynamically updated DASH MPD
5	uk.co.freeview_DASHDRM007 com.tivu_DASHDRM-HTML5-0028	Error thrown when end of the Key Window is reached by a PlayReady terminal	When a PlayReady terminal attempts to play a Period for which no key has been acquired, the HTMLVideoElement shall generate an 'error' event and set its 'error' property to a MediaError object with code MEDIA_ERR_DECODE
6	uk.co.freeview_DASHDRM008	Verify CustomData sent by PlayReady	The terminal shall raise the CustomData information to the application through

	com.tivu_DASHDRM-HTML5-0029	server in a license response is raised to the application	onDRMMessageResult when the terminal sends a license request to the PlayReady server and a CustomData is inserted in the license response by the server
7	uk.co.freeview_DASHDRM010 com.tivu_DASHDRM-HTML5-0031	Verify that the License Server URL contained in the DASH MPD can be overridden through sendDRMMessage	The terminal shall be able to set a LA_URL that will override the LA_URL contained in the WRMHEADER of the DASH MPD
8	uk.co.freeview_DASHDRM011 com.tivu_DASHDRM-HTML5-0032	Verify that license pre-acquisitions are not affected by License Server URL overriding	License pre-acquisitions shall not be affected by License Server URL overriding
9	uk.co.freeview_DASHDRM012 com.tivu_DASHDRM-HTML5-0033	Verify that an application can set a value to be used by the PlayReady Client as the CustomData for all subsequent license post acquisitions	The terminal shall be able to set a CustomData value that will be used in all subsequent license post acquisitions requests
10	uk.co.freeview_DASHDRM014 com.tivu_DASHDRM-HTML5-0035	PlayReady DRM license post-acquisition with Checksum	The Terminal shall be able to automatically acquire a PlayReady license when the play method is called, no license is available for the content and a checksum is present in the DASH MPD

Package 2 – DRM Tests originally from UK (34 tests)

#	ID	Title	Assertion
1	uk.co.freeview_ADINS1001	HTML5 mid-roll advert insertion, DASH HEAAC/AVC_HD_25	Content is presented without artefacts or glitches when a currently playing HTML5 media element referencing DASH with HEAAC/AVC_HD_25 content protected by PlayReady is paused, and a second HTML5 video element

		protected with PlayReady and MP4 HEAAC/AVC_SD_25	preloaded with MP4 HEAAC/AVC_SD_25 media is played in its entirety, and then the playing of the DASH media is resumed
2	uk.co.freev iew_ADINS 1002	HTML5 mid-roll advert insertion, DASH HEAAC/AVC_HD_25 protected with PlayReady and DASH HEAAC/AVC_HD_25	Content is presented without artefacts or glitches when a currently playing HTML5 media element referencing DASH with HEAAC/AVC_HD_25 content protected by PlayReady is paused, and a second HTML5 video element preloaded with DASH HEAAC/AVC_HD_25 media is played in its entirety, and then the playing of the first DASH media is resumed
3	uk.co.freev iew_DASH DRM003	PlayReady DRM licence pre-acquisition failure (server cannot deliver a licence)	When PlayReady licence server cannot perform a licence delivery triggered by 'sendDRMMessage', 'onDRMMessageResult' shall be called with resultCode=2 and DRM_RESULT tag in resultMsg=0x8004C600
4	uk.co.freev iew_DASH DRM013	KID in PlayReady licenseResponse different to KID in license request	The PlayReady terminal shall be able to play a content when the KID in licenseResponse is different to the KID in the license request
5	uk.co.freev iew_DASH DRM015	Support for normal playback of DASH encoded protected content streamed over HTTP	The terminal shall correctly decode and display protected AV content from DASH stream delivered over HTTP protected by PlayReady
6	uk.co.freev iew_DASH DRM016	PlayReady DRM license acquisition with a capitalised SystemID	The terminal shall be able acquire a PlayReady licence when the PlayReady SystemID is capitalised
7	uk.co.freev iew_TERM CAP001	DRMSystemID exposed on device capabilities	The 'profilelist' node of the 'xmlCapabilities' XML Document returned by the application/oipfCapabilities object contains a 'drm' element with a 'DRMSystemID' attribute equal to 'urn:dvb:casystemid:19219'
8	uk.co.freev iew_DASH DRM-MSE-027	DASH microsoft.playready.recomm endation - MSE-EME: HEVC SL3000 video SL3000, audio SL2000	When the application uses MSE/Encrypted Media Extensions and calls the play() method of a HTML5 media object to play DASH microsoft.playready.recommendation protected content containing HEVC video SL3000 and audio SL2000 with different KIDs, the terminal shall acquire a PlayReady license and the media shall be correctly presented.
9	uk.co.freev iew_DASH	MSE-EME - microsoft.playready.recomm endation DRM license pre-	When the application uses MSE/Encrypted Media Extensions and calls the play() method of a HTML5 media object to play DASH

	DRM-MSE-033	acquisition failure (server cannot deliver a license): HEVC SL3000, audio SL2000	microsoft.playready.recommendation protected content containing HEVC video SL3000 and audio SL2000 with different KIDs and the video KID is for a non-existent license then the HTML5 media element remains at 'waitingforkey' with readyState equal to HAVE_METADATA
10	uk.co.freev iew_DASH DRM-MSE-040	Storage of microsoft.playready.recomm endation DRM persistent licence	The terminal is able to store a valid microsoft.playready.recommendation persistent license and load it using sessionId to continue playback after the session has already closed and a new session has started.
11	uk.co.freev iew_DASH DRM-MSE-044	microsoft.playready.recomm endation DRM license renew : Verify content rights can be queried	The microsoft.playready.recommendation terminal post license renewal is able to retrieve Supported Configurations and verify audio and video capabilities.
12	uk.co.freev iew_DASH DRM-MSE-045	Error thrown when received an already expired microsoft.playready.recomm endation license.	After receiving an expired microsoft.playready.recommendation license delivered over HTTPS, the terminal attempts to play DASH microsoft.playready.recommendation protected AV content using MSE/Encrypted Media Extensions. The terminal shall either throw a MediaError with code MEDIA_ERR_DECODE and the MediaKeyStatus status set to "expired", or a TypeError when the update() is called.
13	uk.co.freev iew_DASH DRM-MSE-050	Playback errors when an invalid microsoft.playready.recomm endation license is acquired (invalid rights)	When a microsoft.playready.recommendation licence with an invalid rights is received using Encrypted Media Extensions, the HTMLVideoElement generates an 'error' event and set its 'error' property to a MediaError object with code MEDIA_ERR_DECODE.
14	uk.co.freev iew_DASH DRM-MSE-052	Playback errors when end of media with valid key is reached by a microsoft.playready.recomm endation terminal	Given the terminal plays microsoft.playready.recommendation protected AV content using MSE/Encrypted Media Extensions, and media containing 2 init segments with video protected with PlayReady SL3000 and audio with SL2000, and the 2nd init segment having an unknown key, when the application loads the source buffers with the media then the terminal shall initiate a license request cycle for each init segment and the first's media shall be correctly presented, and then the HTMLVideoElement shall generate an 'error' event and set its 'error' property to a

			MediaError object with code MEDIA_ERR_DECODE and the 2nd init segment's related media shall not be presented.
15	uk.co.freeview_DASHDRM-MSE-054	Expired Error thrown: DASH microsoft.playready.recommendation encoded protected content with License duration = 60s, Playback = 20s	The terminal plays DASH microsoft.playready.recommendation protected AV content using MSE/Encrypted Media Extensions which has a license valid for 60 seconds. After 20 seconds, the playback is paused. After another 40 seconds, playback is resumed. MediaError with code MEDIA_ERR_DECODE shall be thrown as the license duration has been exceeded and the status of MediaKeyStatus shall be set to "expired".
16	uk.co.freeview_DASHDRM-MSE-055	Expired Error thrown: microsoft.playready.recommendation DASH encoded protected content with License Duration = 20s, Playback = 60s.	The terminal plays DASH microsoft.playready.recommendation protected AV content which has license duration as 20 seconds and playback duration as 60 seconds using MSE/Encrypted Media Extensions. After 20 seconds, MediaError with code MEDIA_ERR_DECODE is thrown as the DRM client has not issued any license renewal request and status of MediaKeyStatus is "expired"
17	uk.co.freeview_DASHDRM-MSE-057	Expired Error thrown: microsoft.playready.recommendation DASH encoded protected content with License Duration = 0s, Playback = 20s.	After receiving a microsoft.playready.recommendation license delivered over HTTPS which has a license duration set to 0, the terminal attempts to play 20 seconds of DASH microsoft.playready.recommendation protected AV content using MSE/Encrypted Media Extensions. The terminal shall either throw a MediaError with code MEDIA_ERR_DECODE and the MediaKeyStatus status set to "expired", or a TypeError when the update() is called.
18	uk.co.freeview_DASHDRM-MSE-062	microsoft.playready.recommendation support of live encrypted streaming with key rotation and different init segments	Given the terminal plays microsoft.playready.recommendation protected AV content using MSE/Encrypted Media Extensions, and media containing multiple init segments each with different keys, with video protected with PlayReady SL3000 and audio with SL2000, when the application loads the source buffers with the init segments then the terminal shall initiate a license request cycle for each and the media shall be correctly presented.

19	uk.co.freeview_DASH DRM-MSE-064	microsoft.playready.recommendation support of live encrypted streaming with root and leaf key rotation and expiration	The PlayReady terminal shall display AV content from a DASH microsoft.playready.recommendation encrypted stream with root license in moov and differing leaf licenses in moof boxes, video protected with PlayReady SL3000, audio with SL2000,delivered over HTTP using the MSE/Encrypted Media Extensions, and shall throw a MediaError with code MEDIA_ERR_DECODE and the MediaKeyStatus status of "expired" when the root license expires.
20	uk.co.freeview_DASH DRM-MSE-065	microsoft.playready.recommendation support of multiple init segments going from encrypted to clear to encrypted	Given the terminal plays microsoft.playready.recommendation protected AV content using MSE/Encrypted Media Extensions, and media containing 1st and 3rd init segments with video protected with PlayReady SL3000 and audio with SL2000, and a 2nd init segment with no encryption, when the application loads the source buffers with the init segments' media then the terminal shall correctly present the media.
21	uk.co.freeview_DASH DRM-MSE-067	microsoft.playready.recommendation persistent license expiration	Given a DASH encrypted stream with video protected with microsoft.playready.recommendation SL3000 persistent license with an expiration time 30 seconds and audio with SL2000, delivered by MSE/Encrypted Media Extensions then a PlayReady terminal shall present the AV content and at the expiration time shall raise a MediaError with code MEDIA_ERR_DECODE and status of MediaKeyStatus "expired" and cease presenting the content.
22	uk.co.freeview_DASH DRM-MSE-068	DASH microsoft.playready.recommendation - MSE-EME: AVC 1080p: PR video SL2000, audio SL2000: cbcs encryption	When the application uses MSE/Encrypted Media Extensions and calls the play() method of HTML5 media object to play DASH microsoft.playready AVC 1080p video SL2000 and audio SL2000 with different KIDs and both cbcs encrypted, the terminal shall acquire a PlayReady license and the media shall be correctly presented.
23	uk.co.freeview_DASH DRM-MSE-069	DASH microsoft.playready.recommendation - MSE-EME: AVC 1080p: PR video SL3000,	When the application uses MSE/Encrypted Media Extensions and calls the play() method of HTML5 media object to play DASH microsoft.playready AVC 1080p video SL3000 and audio SL2000 with different KIDs and

		audio SL2000: cbcs encryption	both cbcs encrypted, the terminal shall acquire a PlayReady license and the media shall be correctly presented.
24	uk.co.freev iew_DASH DRM-MSE-070	MSE-EME - microsoft.playready.recomm endation DRM - Terminal renew license before the current license has expired	The terminal plays PlayReady DASH encoded protected AV content using MSE/Encrypted Media Extensions which has a renewable license, with a license duration of 20 seconds, while the playback duration is 60 seconds. Before the initial license expires, the terminal requests a renewal license via a "message" event. The application shall send a request to the license server and update the license using the update() method. The media shall be correctly presented by the terminal for 60 seconds.
25	uk.co.freev iew_DASH DRM-MSE-072	microsoft.playready.recomm endation support of multiple init segments going from clear to encrypted to clear	Given the terminal plays microsoft.playready.recommendation protected AV content using MSE/Encrypted Media Extensions, and media containing 1st and 3rd init segments with no encryption, and a 2nd init segment with video protected with PlayReady SL3000 and audio with SL2000, when the application loads the source buffers with the init segments' media then the terminal shall correctly present the media.
26	uk.co.freev iew_DASH DRM-MSE-073	Playback support of microsoft.playready.recomm endation DASH encoded SL2000 protected content when robustness is set to 3000	When the application uses Encrypted Media Extensions with the videoCapabilities robustness set to 3000 and calls the play() method of a HTML5 media object to play DASH microsoft.playready.recommendation SL2000 protected content then the terminal shall acquire a PlayReady license and the media shall be correctly presented.
27	uk.co.freev iew_DASH DRM-MSE-075	Playback error of microsoft.playready.recomm endation live encrypted streaming with valid root and expired leaf keys	When the application uses Encrypted Media Extensions and Media Source Extension to play DASH microsoft.playready.recommendation encrypted stream, video protected with PlayReady SL3000 with valid root license in moov but expired leaf licenses then the terminal shall throw a MediaError with code MEDIA_ERR_DECODE.
28	uk.co.freev iew_DASH	Playback error of microsoft.playready.recomm endation live encrypted	When the application uses Encrypted Media Extensions and Media Source Extension to play DASH microsoft.playready.recommendation encrypted stream,

		DRM-MSE-076	streaming with expired root and valid leaf keys	video protected with PlayReady SL3000 with expired root license in moov but valid leaf licenses then the terminal shall throw a MediaError with code MEDIA_ERR_DECODE.
29	uk.co.freeview_DASH	DRM-MSE-077	microsoft.playready.recommendation support of live encrypted streaming with root and leaf key rotation	The PlayReady terminal shall display uninterrupted AV content during segment key rotations from a DASH microsoft.playready.recommendation encrypted stream with root license in moov and differing leaf licenses in moof boxes, video protected with PlayReady SL3000, audio with SL2000,delivered using the Encrypted Media Extensions.
30	uk.co.freeview_DASH	DRM-MSE-078	microsoft.playready.recommendation support of live encrypted streaming with pssh key rotation	The PlayReady terminal shall display uninterrupted AV content during segment key rotations from a DASH microsoft.playready.recommendation encrypted stream with licenses in moov and moof boxes that differ and have consecutive validity intervals, video protected with PlayReady SL3000, audio with SL2000, delivered using Encrypted Media Extensions and Media Source Extension.
31	uk.co.freeview_DASH	DRM-MSE-079	microsoft.playready.recommendation support of multiple init segments going from HEVC/AAC-LC to AVC/AAC-LC to HEVC/AAC-LC	Given the terminal plays microsoft.playready.recommendation protected AV content using MSE/Encrypted Media Extensions, and media containing 1st and 3rd init segments with HEVC/AAC-LC 1st and 3rd periods (video protected with PlayReady SL3000, audio with SL2000), and a 2nd init segment with AVC video protected with PlayReady SL3000 and AAC-LC audio with SL2000, when the application loads the source buffers with the init segments' media then the terminal shall correctly present the media.
32	uk.co.freeview_DASH	DRM-MSE-080	microsoft.playready.recommendation support of multiple init segments going from clear to encrypted (AVC/AAC-LC) to clear	Given the terminal plays microsoft.playready.recommendation protected AV content using MSE/Encrypted Media Extensions, and media containing 1st and 3rd init segments with no encryption, and a 2nd init segment with AVC video protected with PlayReady SL3000 and AAC-LC audio with SL2000, when the application loads the source buffers

#	Test ID	Title	Assertion
			with the init segments' media then the terminal shall correctly present the media.
33	uk.co.freeview_DASH DRM-MSE-081	microsoft.playready.recommendation support of multiple init segments going from clear (HEVC/AAC-LC) to encrypted (HEVC/AC4) to clear (HEVC/AAC-LC)	Given the terminal plays microsoft.playready.recommendation protected AV content using MSE/Encrypted Media Extensions, and media containing 1st and 3rd init segments with no encryption(HEVC/AAC-LC), and a 2nd init segment with (HEVC/AC4) video protected with PlayReady SL3000 and AAC-LC audio with SL2000, when the application loads the source buffers with the init segments' media then the terminal shall correctly present the media.
34	uk.co.freeview_DASH DRM-MSE-082	microsoft.playready.recommendation support of multiple init segments going from clear (HEVC/AAC-LC) to encrypted (HEVC/AC3) to clear (HEVC/AAC-LC)	Given the terminal plays microsoft.playready.recommendation protected AV content using MSE/Encrypted Media Extensions, and media containing 1st and 3rd init segments (HEVC/AAC-LC) with no encryption, and a 2nd init (HEVC/AC3) segment with video protected with PlayReady SL3000 and audio with SL2000, when the application loads the source buffers with the init segments' media then the terminal shall correctly present the media.

Package 3 – DRM Tests originally from Italy (7 tests)

#	Test ID	Title	Assertion
1	com.tivu_DASH DRM-HTML5-0036	Verify signalling of PlayReady DRM capability to HbbTV applications	The xmlCapabilities property of the application/oipfCapabilities object shall provide a DRMSystemID of urn:dvb:casystemid:19219

2	com.tivu_UHD-DRM-PLAYREADY-0010	HTML5 static video element displaying DASH PQ10 (without Optional Supplemental Enhancement Information) HEVC, Main 10, Level 5.1, 50 FPS content encrypted using PlayReady	When the terminal loads an HbbTV Application including an HTML5 media object which references a static MPD defining a stream containing HEAAC audio and HEVC-encoded 3840x2160p 50fps PQ10 HDR format (without Optional Supplemental Enhancement Information) video content with BT.2020 colour space both encrypted using PlayReady, the media shall be correctly presented by the terminal and the playback shall be smooth and contain no decoding artifacts.
3	com.tivu_UHD-DRM-PLAYREADY-0020	HTML5 static video element displaying DASH HLG10 HEVC, Main 10, Level 5.1, 50 FPS content encrypted using PlayReady	When the terminal loads an HbbTV Application including an HTML5 media object which references a static MPD defining a stream containing HEAAC audio and HEVC-encoded 3840x2160p 50fps HLG10 HDR format video content with BT.2020 colour space both encrypted using PlayReady, the media shall be correctly presented by the terminal and the playback shall be smooth and contain no decoding artifacts.
4	com.tivu_UHD-DRM-SL3000-0001	HTML5 static video element displaying DASH PQ10 (without Optional Supplemental Enhancement Information) HEVC, Main 10, Level 5.1, 50 FPS content encrypted using PlayReady	When the application calls the play() method of HTML5 media object which references a static MPD defining a stream containing HEVC 2160p - PR video SL3000, audio SL2000, different KIDs for video and audio - using Encrypted Media Extensions, the media shall be correctly presented by the terminal and the playback shall be presented.
5	com.tivu_UHD-DRM-SL3000-0002	Verify that the License Server URL contained in the DASH MPD can be overridden through sendDRMMessage	When PlayReady license server cannot perform a license delivery triggered by 'sendDRMMessage', 'onDRMMessageResult' shall be called with resultCode=0

6	com.tivu_UHD-DRM-SL3000-0003	HTML5 static video element displaying DASH PQ10 (without Optional Supplemental Enhancement Information) HEVC, Main 10, Level 5.1, 50 FPS content encrypted using PlayReady - Using EME	When the application calls the play() method of HTML5 media object which references a static MPD defining a stream containing HEVC 2160p - PR video SL3000, audio SL2000, different KIDs for video and audio - using Encrypted Media Extensions, the media shall be correctly presented by the terminal and the playback shall be presented.
7	com.tivu_UHD-DRM-SL3000-0004	MSE-EME - microsoft.playready.recommendation DRM license pre-acquisition failure (server cannot deliver a license): HEVC SL3000, audio SL2000 - Using EME	When the application calls the play() method of HTML5 media object which references a static MPD defining a stream containing HEVC 2160p - PR video SL3000, audio SL2000, different KIDs for video and audio - using Encrypted Media Extensions, the media shall be correctly presented by the terminal and the playback shall be presented.

Package 4 – Gap Filling Tests originally from Italy (8 tests)

#	Test ID	Title	Assertion
1	com.tivu_AITPRIORITY	Priority-based AUTOSTART App-launching with and without IP connection	An AIT containing a single AUTOSTART app is signaled on a service via both HTTP and DSM-CC, where HTTP transport is listed first. When an IP connection is available to the device, the app is launched via HTTP. When the device then changes to a different service and an IP connection is unavailable, and then the device changes back to the original service, the app is launched via DSMCC.
2	com.tivu_INTERACTION001	When a resident application is launched it shall not kill the running HbbTV application.	After the age thresold in the PIN-controlled Parental Control menu is changed by the user manually, the running HbbTV application should not be killed.\nNOTE: "PIN-controlled Parental Control menu" is only an example and the instructions to the operator may need review.

3	com.tivu_INTERAC TION002	When a resident application is launched it shall not kill the launching HbbTV application.	After the age thresold in the PIN-controlled Parental Control menu is changed by the user manually, the launching HbbTV application should not be killed. NOTE: See INTERACTION001 re instructions to operator.
4	com.tivu_RCU001	Termination of non-autostart broadcast-related application using EXIT key	Terminal shall terminate a running non-autostart broadcast-related application when the EXIT function (or equivalent) is used.
5	com.tivu_RCU003	Termination of broadcast independent application using EXIT function	Terminal shall terminate a broadcast independent application when the EXIT function (or equivalent) is used.
6	com.tivu_STREAM EVENT001	Stream events using the DSMCC stream event object	Events listened for and referenced using a DSMCC stream event object shall be registered when present.
7	com.tivu_STREAM EVENT002	Stream events using an XML file	Events listened for and referenced using a XML file shall be registered when present.
8	com.tivu_LIFECYC LE001	When the device under test is reset to it's factory state, and then tuned to a channel with an autostart application, the autostart application is launched.	When the device under test has been reset to its factory state and then tuned to a service with an autostart broadcast related application, the application is launched. NOTE: MAY NEED AN OPTIONAL FEATURE

Package 5 – HTTP Redirect Tests originally from UK (8 tests)

#	ID	Title	Assertion
1	uk.co.freeview_REDIR 001-01	Receivers shall follow a HTTP GET 301 redirect	The terminal shall correctly follow a HTTP 301 redirect from a HTTP GET request.
2	uk.co.freeview_REDIR 001-02	Receivers shall follow a HTTP GET 302 redirect	The terminal shall correctly follow a HTTP 302 redirect from a HTTP GET request.
3	uk.co.freeview_REDIR 001-03	Receivers shall follow a HTTP GET 303 redirect	The terminal shall correctly follow a HTTP 303 redirect from a HTTP GET request.
4	uk.co.freeview_REDIR 002-01	Receivers shall follow a HTTP POST 301 redirect	The terminal shall correctly follow a HTTP 301 redirect from a HTTP POST request.

5	uk.co.freeview_REDIR 002-02	Receivers shall follow a HTTP POST 302 redirect	The terminal shall correctly follow a HTTP 302 redirect from a HTTP POST request.
6	uk.co.freeview_REDIR 002-03	Receivers shall follow a HTTP POST 303 redirect	The terminal shall correctly follow a HTTP 303 redirect from a HTTP POST request.
7	uk.co.freeview_REDIR 003	Receivers shall support at least ten HTTP 3xx redirects	The terminal shall correctly receive the image file referenced after ten redirections.
8	uk.co.freeview_REDIR 004	Prevent infinite loops by detecting more than ten redirects	Receivers SHALL prevent the following of infinite loops

Package 6 - Gap Filling Tests originally from UK (3 tests)

#	ID	Title	Assertion
1	uk.co.freeview_AUDDESC001	Enabling broadcaster-mix audio description AdaptationSet in a DASH MPD via HTML5 Media Element	Given a DASH stream playing in an HTMLVideoElement containing one video AdaptationSet, a main audio AdaptationSet (A) and a broadcaster-mix audio description AdaptationSet (B), when the AudioTrack corresponding to AdaptationSet (B) has its 'enabled' property set to true, a 'change' event is dispatched by the AudioTrackList and the audio description elementary stream is presented
2	uk.co.freeview_HTTPCAP001	Open two HTTP connections during media playback	Opening two HTTP connections shall not affect media playback
3	uk.co.freeview_USERAGENT001	User-Agent header in HTTP requests	XMLHttpRequests from the DUT shall contain the User-Agent header correctly formatted

Annex 3: Documentation Provided

HbbTV V3 Test Material Provider Agreement (Commercial)

HbbTV Test Repository Access Agreement v3.0

HbbTV Test Material Maintenance Agreement v1

Annex 4: Testing Approach Considerations

None.