

Request for Proposals for implementing a HbbTV Developer Portal

April 2021

Introduction and Scope of Work

The purpose of this document (the “RFP”) is to request from your company (the “Supplier”) a technical and economical proposal (the “Proposal”) for the implementation of a first version of a HbbTV Developer Portal and certain related services.

This RfP has been drafted by the “HbbTV Marketing and Education Working Group” (the “MEWG”) in charge of the realization of the Portal project on behalf of the “HbbTV Association”, an association under the laws of Switzerland, having its registered office at L'Ancienne-Route 17A, CH-1218 Grand-Saconnex, Switzerland (“HbbTV”); it is a global initiative aimed at harmonizing the broadcast and broadband delivery of entertainment services to consumers through connected TVs, set-top boxes and multiscreen devices. The HbbTV specification is developed by industry leaders to improve the video user experience for consumers by enabling innovative, interactive services over broadcast and broadband networks.

Developer portals provide quick access to technical information in a structured, searchable and crawlable way. They play a critical role in application development and professionally made developer portals support thriving a vital developer community.

Technical information for HbbTV is spread across different places. Whilst API documentation can be found within the specification, there is also reference sample code available on other platforms such as Github.

This project aims to create a developer portal for HbbTV application technologies assembling existing information and creating new wherever it is not available.

This RFP compiles the necessary minimal functionality for the “HbbTV Developer Portal First Version” (the “Portal”); this first run of the Portal is envisaged as an experimental project of one year duration; the Supplier are asked to make their proposal to cover the setup, the content production and the running costs for one year time span.

Required Content

Developer portals are usually structured in a similar manner and developers are used to find information there, if they are not familiar with the environment. Therefore, it is recommended to follow common patterns.

The essential content of the Developer Portal is described in the following clauses. Generally speaking, the Portal aims at offering a clear understanding – with examples, guidelines, specification references and available resources – of the programming additions required by the HbbTV specification to manage and to program specific TV related features such as, for example, an application launch and its lifecycle, its signalization on delivery means, the remote control interaction, the launch and control of video streams and so on.

– Guidelines

Article based section which is composed of text, code snippets, images and diagrams. Articles are written in tutorial style and explain basic functionality of the environment.

The first version of the portal shall contain an article at least about:

1. Hello World application
2. Handling the broadcast a/v object
3. Interaction with the remote control ([example](#))
4. Overview about HbbTV architecture

The supplier will present the articles to the HbbTV MEWG group for an approval to be published on the Developer Portal.

This section can and should be extended over time.

– Reference

Documentation of all HbbTV/OIPF specific methods. This information can be gathered from the specification (see example below).

The reference section shall contain at least:

1. Index
2. Method name and description
3. Parameter name and description
4. Expected results (including errors)
5. Minimum HbbTV version

Before creating this section, the supplier shall agree with the HbbTV MEWG on a template showing how information is presented and the details it entails.

The supplier will present the reference section content to the HbbTV MEWG group for an approval to be published on the Developer Portal.

Promise <code>switchMediaPresentation</code> (Element originalMediaObject, String timelineSelector, Boolean timelineSource, Number switchTime, Element newMediaObject, String minimumSwitchPerformanceRequired)		
Description	Requests a switch from the media being presented by <code>originalMediaObject</code> to the media to be presented by <code>newMediaObject</code> . The switch is to take place at time <code>switchTime</code> as defined in the timeline identified by <code>timelineSelector</code> carried in the media identified by <code>timelineSource</code> .	
Arguments	<code>originalMediaObject</code>	Either a video/broadcast object or an HTML5 video element.
	<code>timelineSelector</code>	Either a URN identifying a timeline or null indicating that the switch is to happen when the end of the content being played by <code>originalMediaObject</code> is reached.
	<code>timelineSource</code>	If true indicates that the timeline is carried in the <code>originalMediaObject</code> , if false indicates that the timeline is carried in the <code>newMediaObject</code> .
	<code>switchTime</code>	If <code>timelineSelector</code> is a URN then this defines the time in seconds at which to switch from <code>originalMediaObject</code> to <code>newMediaObject</code> on the timeline defined by <code>timelineSelector</code> and <code>timelineSource</code> . If <code>timelineSelector</code> is null then this is irrelevant.
	<code>newMediaObject</code>	Either a video/broadcast object or an HTML5 video element.
	<code>minimumSwitchPerformanceRequired</code>	Identifies zero or one minimum performance profiles that apply to the switch. If no performance profiles apply then this argument shall be an empty String. The requested switch shall proceed even if it is known to the terminal that either the switch duration or the switch accuracy or both would be worse than those required for all supported performance profiles. (For example, the switch is a non-time-critical switch to local news). If a performance profile applies to the switch then this argument shall be a URN that is included in a <code>profile</code> element in the <code>ta</code> element in the XML capabilities (see clause 10.3.1). The requested switch shall fail if it is known to the terminal that the performance requirements for the specified profile will not be met. Even when <code>minimumSwitchPerformanceRequired</code> identifies one or more performance profiles that are supported by the terminal and the switch does not fail, there is a small probability that the switch may not meet the timing requirements due to real-time effects that cannot be predicted in advance. See clause 9.3.4 of the present document.
Returns	<code>Promise</code>	The method always returns a Promise and never raises a synchronous exception.

– Resources

The resource section provides additional information which is useful for application development. It can collect tools, sample application or other references which can also be hosted on 3rd party websites.

The first version shall contain:

- Links to blessed HbbTV applications (e.g. reference applications)
- Links to tools (e.g. HbbTV browser extensions or VMs)
- Release notes of different HbbTV versions

The supplier will present the resource to the HbbTV MEWG group for an approval to be published on the Developer Portal.

– Forum Integration

To enable communication between developers, a virtual forum should be created using the stackoverflow.com platform. Using a common tag word (such as #hbbtv) can be used as identifier to group posts. This part is requiring a registration to the stackoverflow.com by the users and it will be a linked but an independent part from the Developers Portal. The responsibility of what will be published on stackoverflow.com using #hbbtv tag is under the users shoulders only.

– Search

The portal shall be searchable for users and crawlable for search engines. The search should offer the option to limit the search to a single section (e.g. reference) and allows the usage of operators in the search. It should include results of discussion threads in stackoverflow.com.

Other parts such as T&C or sitemap sections, which are not explicitly mentioned, should be included in the Portal. The Portal website shall be accessible under an easy to remember domain and have deep links for all web sites.

Method during Developments

The development of the developer portal should follow common best practices and include principles, such as:

- Mobile-first approach during development
- Web site should be tested across all major browser engines (Chrome, Firefox, Safari on desktop, iOS and Android)
- Source code is hosted in a code repository to allow version control
- External dependencies (e.g. Javascript libraries) as minimal as possible
- If Javascript frameworks are used, the decision should be reasoned in the RFP
- Easy deployment through automation
- Editorial content should be presented to the HbbTV MEWG for publishing approval on the Developer Portal.

Project Budget

As already mentioned, this an experimental project managed by MEWG. It will last one year from market deployment; during this year the MEWG will monitor the project in term of number of visitors, number of questions asked, time between questions, developers help received and other relevant KPI. In other terms, the success of the Portal will be key for this project renewal at due date.

The Supplier is asked to make a proposal considering both costs:

- For setting up the portal together with the production of the “editorial” content as described in “Required Content” clause above

- For managing the Portal community for the experimental project time duration defined above; this requires resources with the necessary programming skills able to maintain and update the content when needed ; they require a good understanding of technical specification in general and HbbTV in particular.

Developer Portal Samples

For reference, these are other developer portals which can be used as reference and inspiration for the Portal:

1. [Samsung Tizen](#)
2. [Google IMA SDK](#)

Proposal Submission Deadline

Proposals shall be submitted by the Supplier via email to angelo.pettazzi@mediaset.it, chair of the HbbTV Marketing and Education Working Group, not later than end of **week 19**, i.e. **May 16, 2021**

Further Information

Contract, administrative and technical queries should be sent to:

HbbTV Marketing and Education Working Group
angelo.pettazzi@mediaset.it

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 5 working days to all Suppliers.

Requirements

The Suppliers and the Proposals must fulfil the following requirements.

1. Proposal Structure and Contents

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

2. Pricing

The preferred model for the creation of the HbbTV Developer Portal, including content, documentation and its tools, is a fixed payment, although HbbTV is open to other payment models as well.

Prices quoted shall include coverage for warranty. Suppliers shall provide separate pricing and terms for support and maintenance. All pricing must be in Euros including all applicable fees and taxes.

Appointment Process

The process of making any appointments of a Supplier or Suppliers is described below.

1. Evaluation and Appointment

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

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;
- f) Select no Proposals at all.

3. Not Accepted Proposals

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

Intellectual Property

The HbbTV Association retains all 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 HbbTV Association shall own all intellectual property rights of all material produced as part of the logistics support contract excluding elements licensed from third parties.

Exclusion of liability / Costs

The HbbTV Association has prepared this RfP in good faith with a particular interest for the implementation of the Portal. 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.

Confidentiality

All sections of the Proposals may be shared with any member of the HbbTV Association.

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 the 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:

1. 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.
2. 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 the 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.
3. 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.
4. 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.
5. 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.
6. 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.

7. 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

1. Table of Contents
2. Executive Summary
3. Portal structure
 - 3.1. Features included within the HbbTV Developers Portal
 - 3.2. Expected source of the content (e.g. 3rd party, created by Supplier for the purpose of this RfP, re-use of existing content) with details.
 - 3.3. Other relevant resources or reference
4. Content preparation, packaging and serving
 - 4.1. Tools that the Supplier intends to use for content preparation and packaging
 - 4.2. License(s) to be used for any tools or utilities that would be needed
5. Deviations from the RfP
6. Supplier's Project Personnel
 - 6.1. List of Project Members and contact information
 - 6.2. Background, Experience and Skill Sets of Project Members
 - 6.3. Source of specialised or scarce expertise
7. Schedule for deliverables
8. Supplier Information
 - 8.1. Corporate Information
 - 8.2. References
 - 8.3. Other relevant involvement
 - 8.4. QA processes
 - 8.5. Contact Information

9. Payments and terms & conditions

9.1. Prices and terms & conditions relating to Pricing, Pricing models, warranty

9.2. Support and maintenance prices and terms

9.3. Any other costs