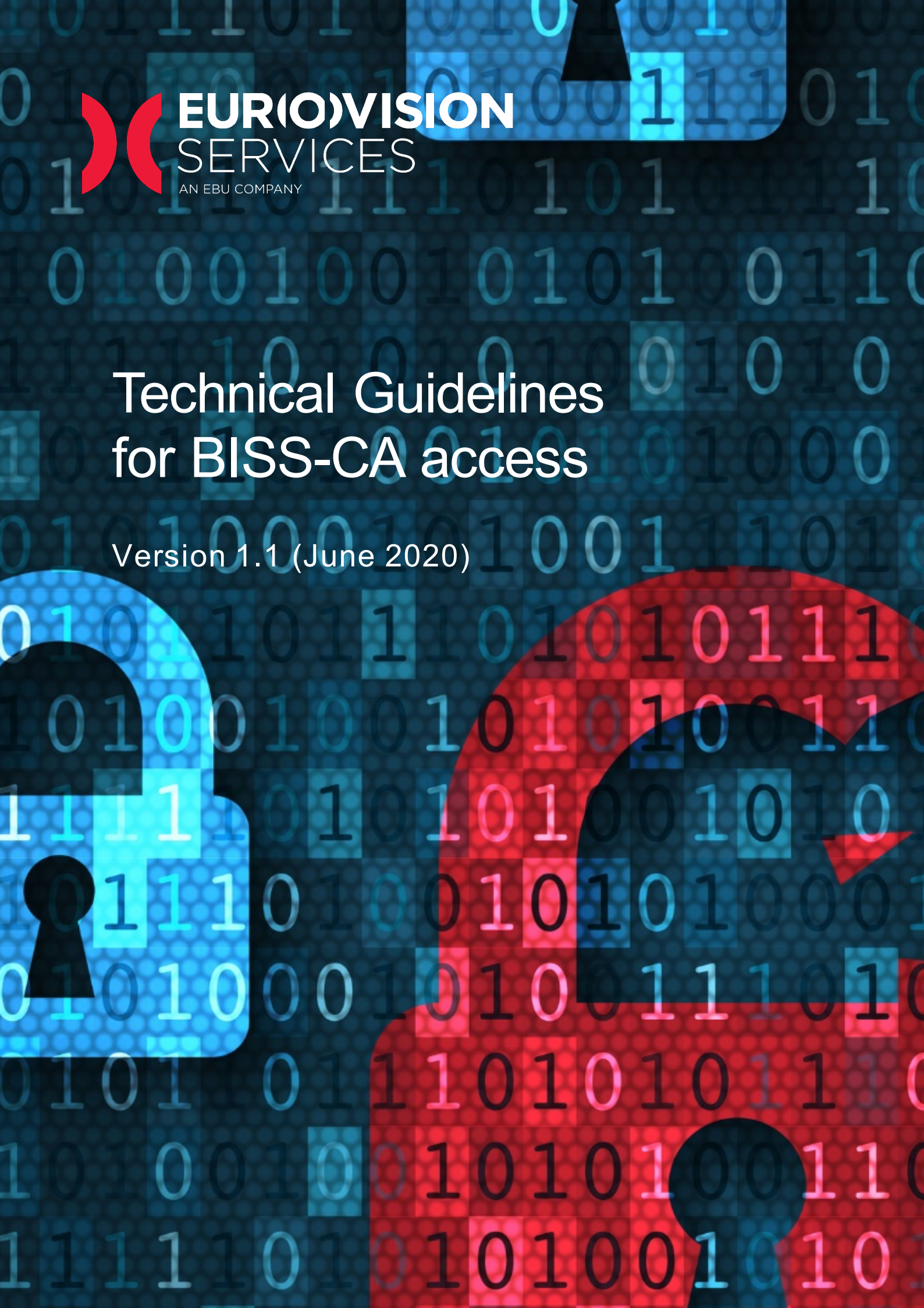
EUR(O)VISION SERVICES
AN EBU COMPANY

Technical Guidelines for BISS-CA access

Version 1.1 (June 2020)



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Document version

Version	Date	Comments / Changes
1.0	June 11, 2020	Initial version
1.1	June 25, 2020	Minor corrections New screenshots of the Eurovision.net portal

1 Introduction

Eurovision Services (ES) will use the new BISS-CA encryption standard starting in 2020.

BISS-CA is a conditional access system based on open cryptographic standards. It uses a combination of symmetric and asymmetric ciphers to protect the transmitted content and entitle or revoke in real time any receiver in an interoperable manner.

This document provides guidelines to upgrade decoders to receive BISS-CA encrypted signals. Specific instructions are included for decoders provided by ES to selected partners and broadcasters.

To receive BISS-CA transmissions, broadcasters require:

- A compatible decoder
- The right software version and BISS-CA license,
- The decoder to be registered on the www.eurovision.net website,
- The decoder public key to be provided to the ES team to be inserted into the ES database. The public key is the unique identifier used to authorize each individual decoder to decrypt the received signal.

This document explains the step-by-step the procedure to obtain BISS-CA access for broadcasters' equipment.

2 Equipment

As of the creation date of this document, the following decoder models have been tested by ES and validated for BISS-CA use:

- MediaKind / Ericsson RX8200
- Nevion MI-FA

We expect to add the Ateme DR5000 soon. At that time, ES will provide updated documentation. Currently, we will upgrade only the MediaKind/Ericsson RX8200 which is the only decoder model addressed in this document.

This list of equipment will continue to be updated as soon as new models are tested and proved to be fully compatible with the standard. ES is working closely with various equipment manufacturers to ensure the interoperability of the standard.

ES does not assume any responsibility if broadcasters use decoder models that have not been tested or validated.

2.1 Decoder upgrade campaign for units sold or owned by ES

This upgrade for decoders owned by ES or sold to broadcasters and partners by ES applies only to

- MediaKind / Ericsson RX8200s.

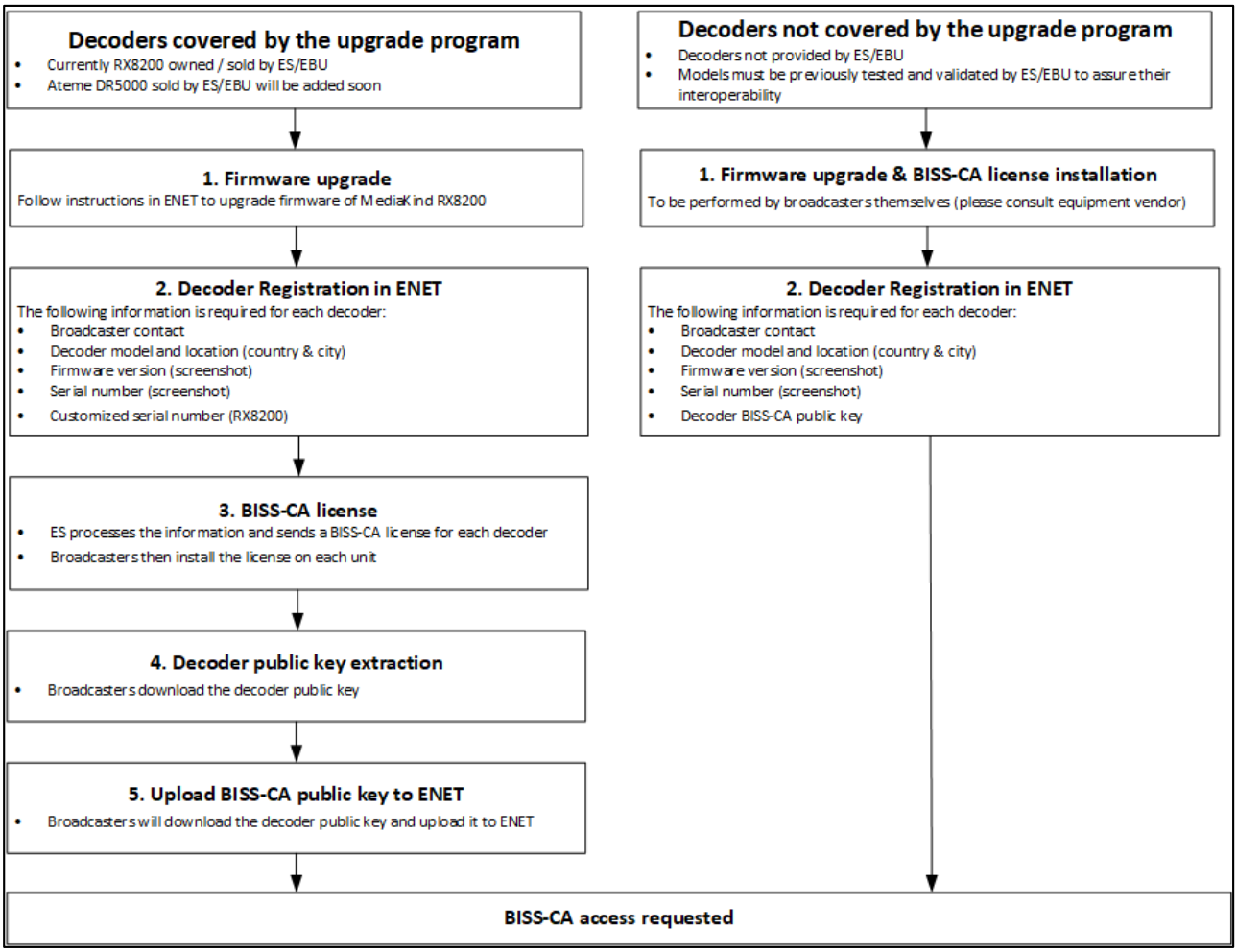
For these units, ES will provide a BISS-CA license and equipment support.

2.2 Models not eligible for the upgrade campaign

Any model not included in section 2.1 is not covered by this upgrade campaign, including MediaKind / Ericsson RX8200s purchased from a third party. In these cases, broadcasters are requested to contact the equipment manufacturers to upgrade their units to BISS-CA and to register them on the ES website www.eurovision.net. (See section 3.2).

3 Upgrade process

The upgrade process for all decoders is composed of different steps. These are mandatory and must be completed sequentially. The process will differ for units that are part of the upgrade program (see section 2.1) where ES provides the BISS-CA license, and for decoders that were procured from a third party, as shown in the diagram below.



4 3.1 Firmware upgrade

The technical notice “BISS-CA Ericsson / MediaKind RX8200 – Upgrade Procedure FW 8.25.1” describes the firmware upgrade process for the Ericsson/MediaKind RX8200 model. The documents can be found on the following page:

https://www.eurovision.net/insights/technical/biss-ca-migration-files-download

For other models, broadcasters must contact the manufacturers directly.

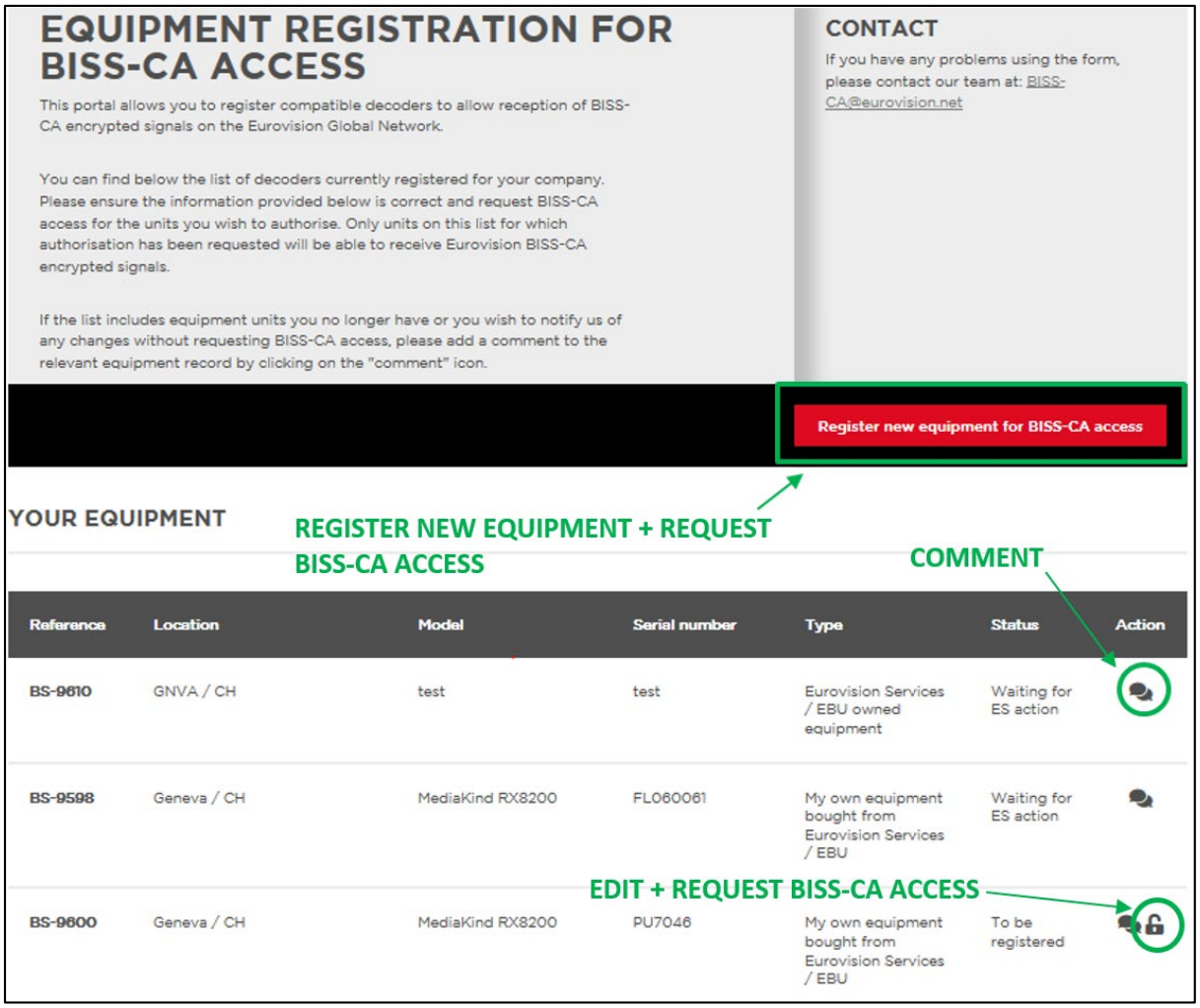
Please ensure decoders have the firmware updated before registering them on www.eurovision.net (see section 3.2).

3.2 Register decoder on www.eurovision.net

ES has created a space for broadcasters to register and request BISS-CA access for their decoders https://www.eurovision.net/biss-ca-migration.

Broadcasters can log in using the same credentials they use for Eurovision.net. If you need to create an account for Eurovision.net, please use a professional email address as public domain accounts such as Gmail, Yahoo etc. are not accepted.

After logging in, broadcasters will see the decoders that are listed for their organization in the section "Your equipment". This list is pre-filled with the units in ES's records.



For each decoder, the following parameters are listed:

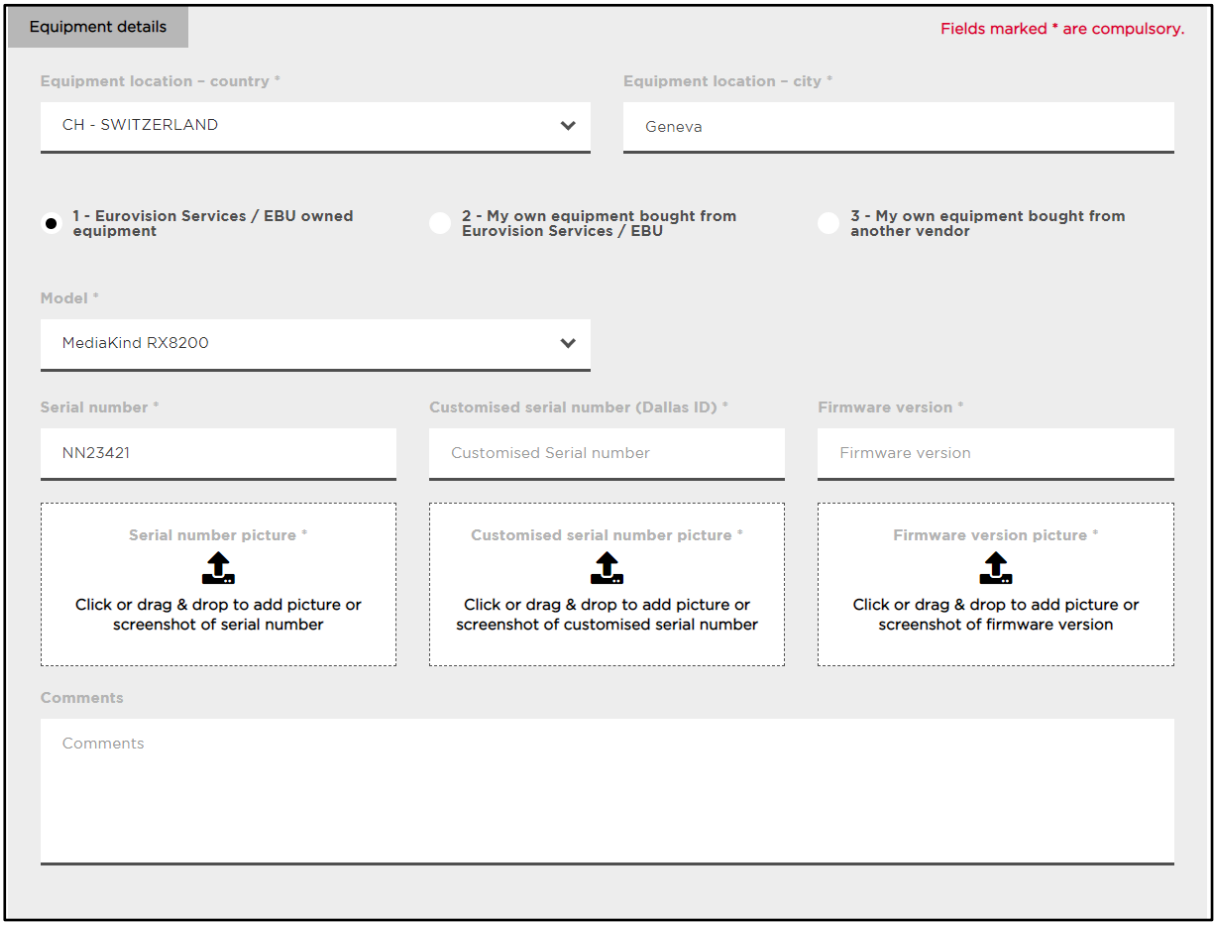
Parameter	Meaning
Reference	Unique identifier for each decoder. Please mention this identifier in all BISS-CA communications
Location	City and country where the decoder is located
Model	Equipment model
Serial Number	Equipment serial number
Type	Information about ownership: 1 - Equipment owned by ES/EBU 2 - Equipment owned by the broadcaster purchased from ES/EBU 3 - Equipment owned by the broadcaster purchased from another vendor
Status	Status of the BISS-CA request • ***To be registered***: no BISS-CA access has been requested • ***Waiting for ES action***: ES is processing the BISS-CA access request • ***Waiting for customer***: the broadcaster must provide additional information to continue with the BISS-CA access request • ***BISS-CA license in process***: the BISS-CA request has been received and processed and a license has been requested from the equipment manufacturer • ***Waiting for public key***: the BISS-CA license has been sent by mail to the broadcaster and ES is waiting to receive the decoder's public key • ***To be registered in BISS-CA NMS***: all the required information has been received and ES is in the process of adding the decoder to its control system so it can be authorized • ***BISS-CA access completed***: the upgrade process has been

Parameter	Meaning
	completed and the decoder is correctly registered • ***Impossible***: some technical constraint prevents this particular decoder from obtaining BISS-CA access

Broadcasters can then perform the following actions:

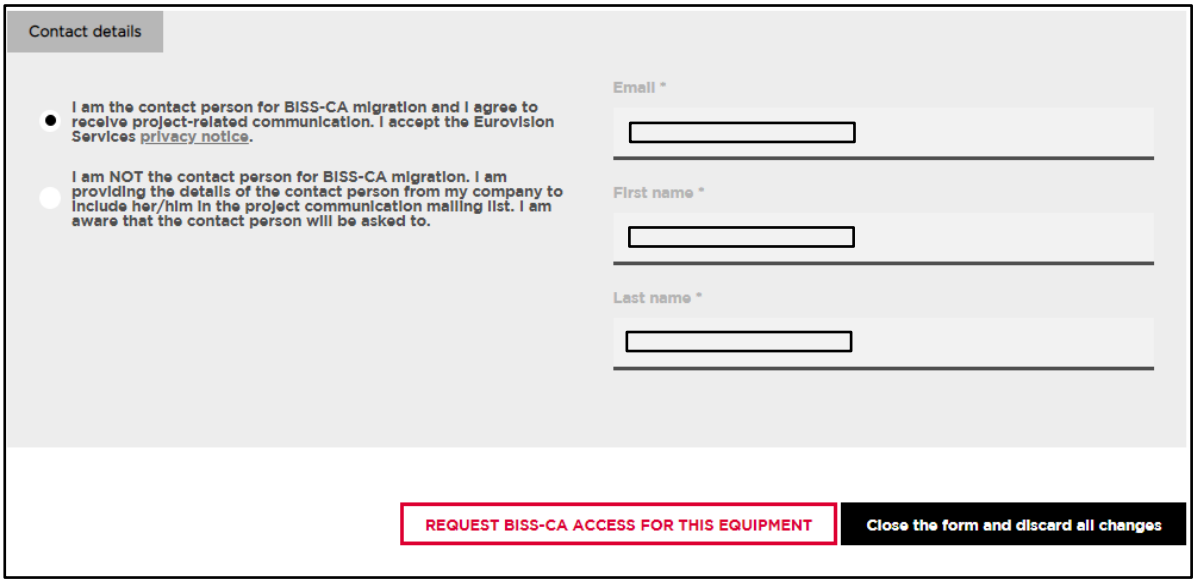
- **Request BISS-CA access for equipment listed** under “My equipment” by clicking on the “Edit/Request BISS-CA access” button to the right of each decoder listed.

The following form will be displayed, containing the pre-filled information.



Broadcasters can correct the information displayed if they see any error as well as add comments.

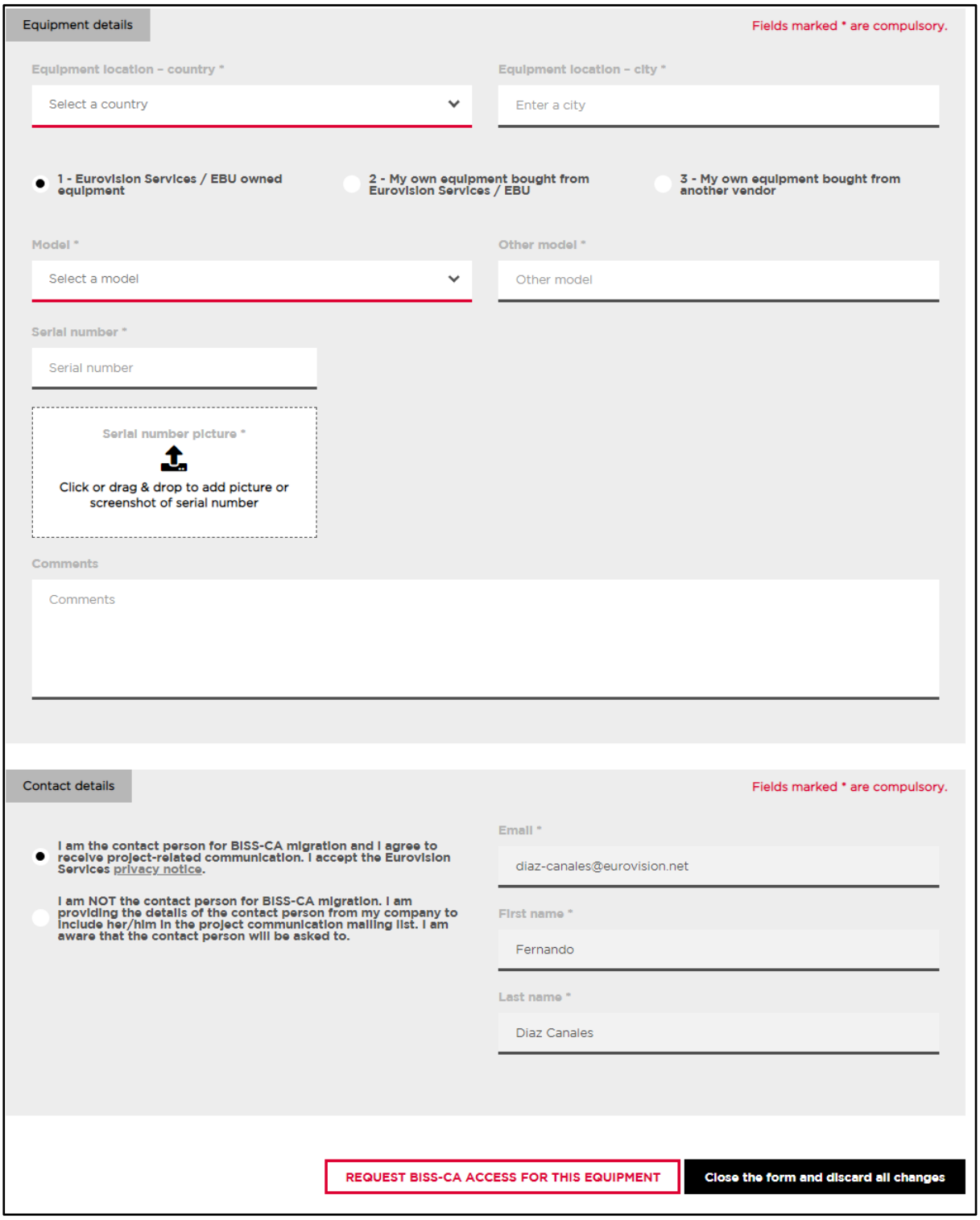
Please note that the details needed depend on the type of equipment (owned by ES, sold by ES or purchased from a third party). If the equipment was purchased by the broadcaster, broadcasters must upload a file containing the decoder BISS-CA public key before requesting the BISS-CA access.



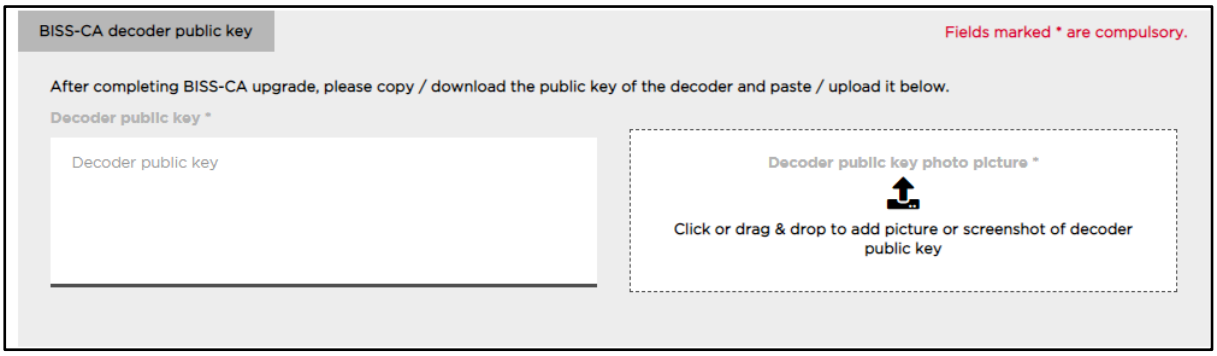
Broadcasters must also include the contact details of the person in charge of BISS-CA access in their organization. This person will be contacted by ES at a later stage.

To complete the process, broadcasters must click on “Request BISS-CA access for this equipment” and accept the terms & conditions and the privacy policy.

- **Add new equipment not listed and request BISS-CA access** by clicking on the button “Register equipment for BISS-CA access”. The following form will be displayed, which must be completed by the broadcaster. This is the same form without pre-filled information.



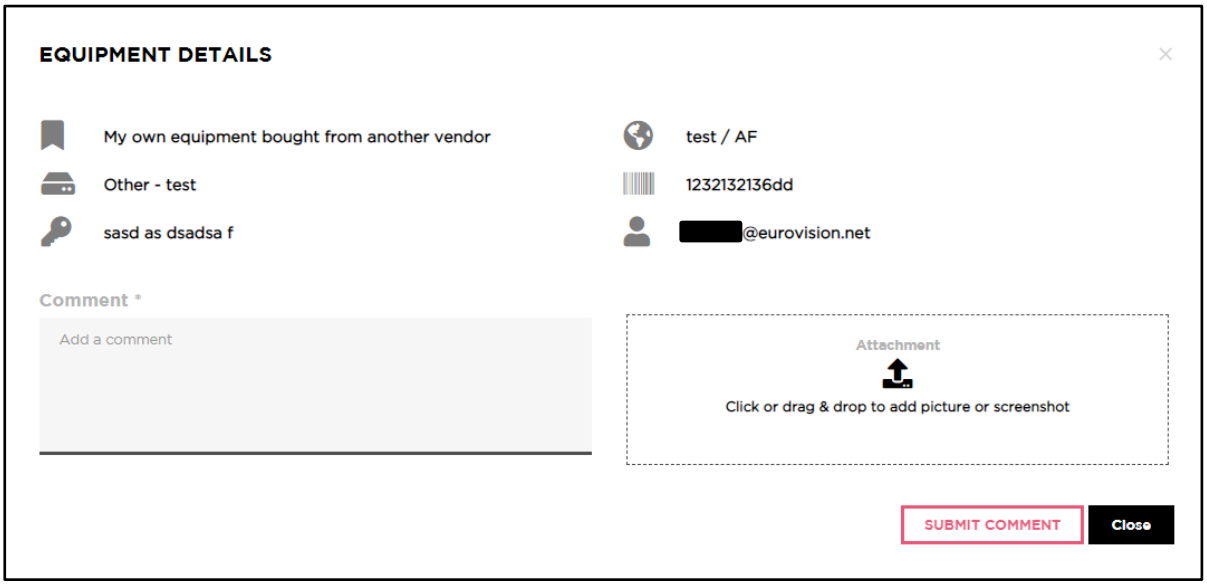
Please note that the information needed depends on the type of equipment (owned by ES, sold by ES or purchased from a third party). If the equipment was purchased by the broadcaster, broadcasters must upload a file containing the decoder BISS-CA public key (see below).



Details of the contact person must be entered. Depending on the ownership of the decoder, terms & conditions must be accepted as well in order to proceed.

- **Add comments on decoders in the list** (by clicking on the "comment" button to the right of each decoder listed). This option can be used in case the information in the list is incorrect and broadcasters do not want to request BISS-CA access for these units, or if the broadcaster has already requested BISS-CA access but provided incorrect information on the form. If broadcasters want to add comments for units for which they want to request BISS-CA access, they must click the "Edit/Request BISS-CA access" button.

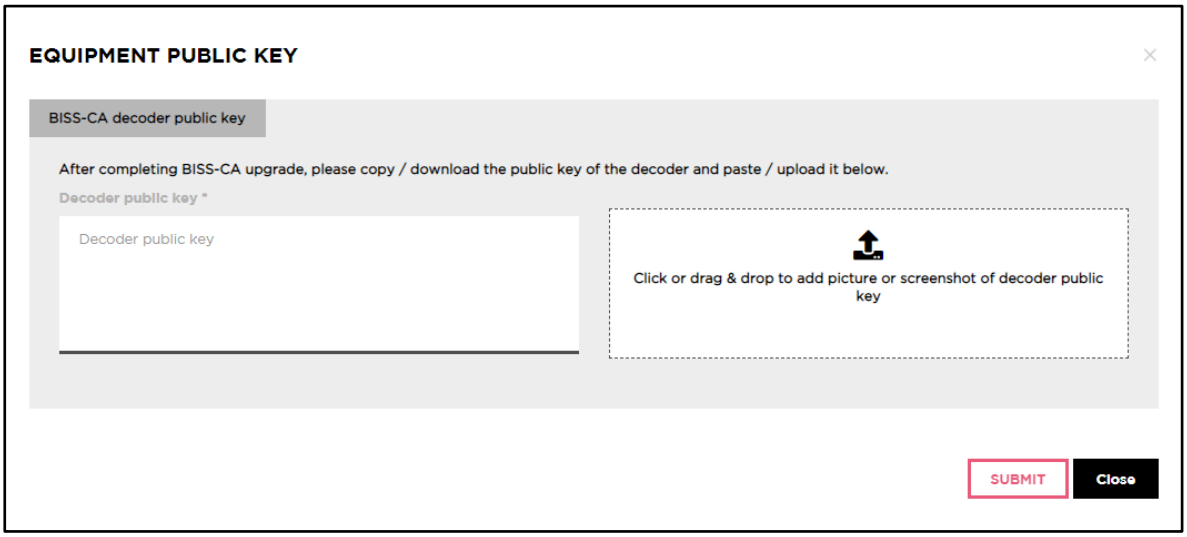
In this case, the following form must be filled in.



- **Upload the decoder public key**: this can be done by clicking on the key symbol next to the decoder. This option is only available when the following three conditions have been fulfilled:
    - The decoder is owned by ES or has been sold by ES. For units purchased by broadcasters from other vendors, the BISS-CA public key must be uploaded directly when filling in the registration form.

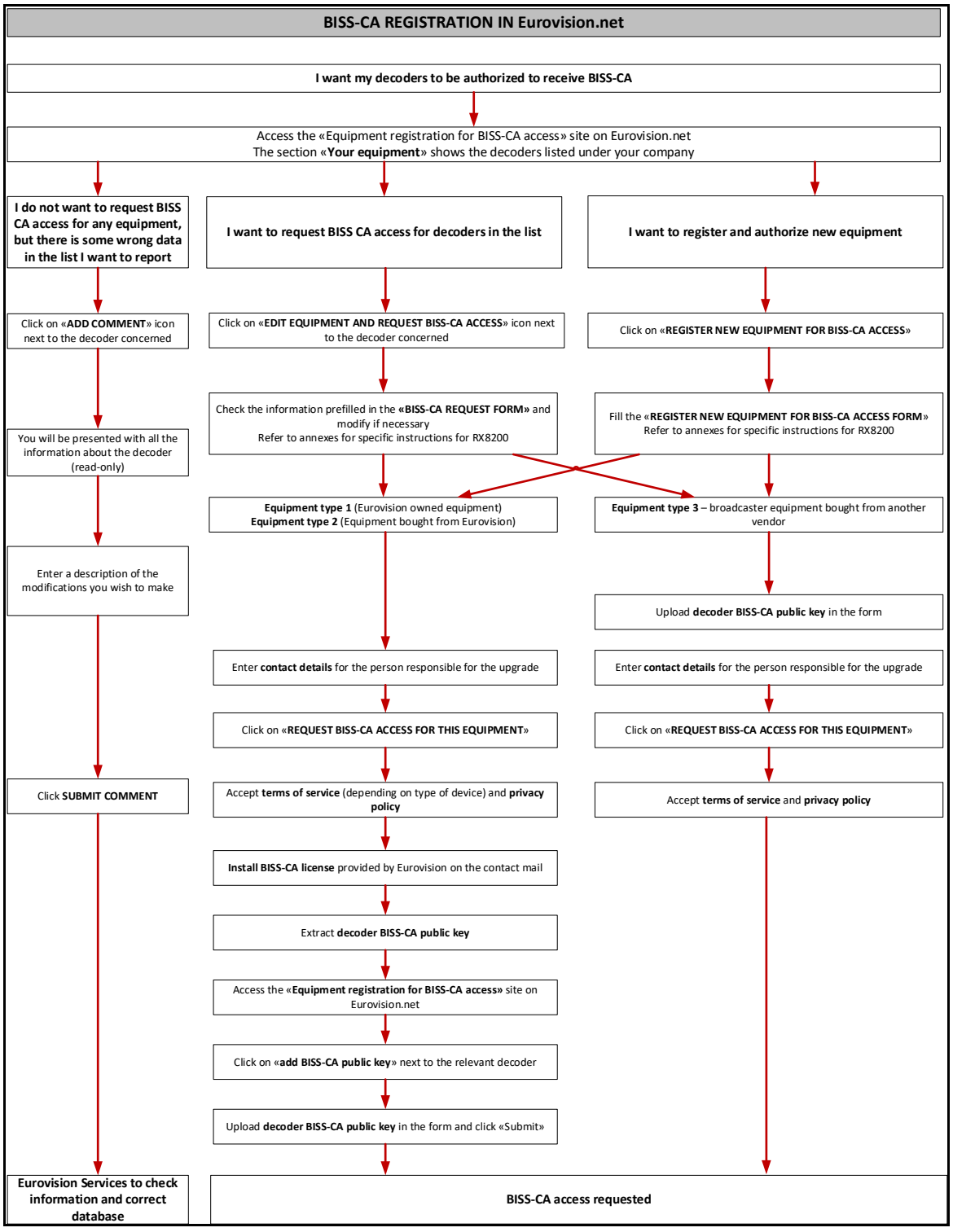
- ES has already provided a BISS-CA license to the broadcaster (status will be then “waiting for public key”).
- The broadcaster has already applied the BISS-CA license to the decoder. This triggers the generation of the decoder BISS-CA public key.

In this case, the broadcaster must extract the BISS-CA public key from the decoder web interface and upload it to www.eurovision.net using the following form:



The technical documentation provided for MediaKind RX8200 contains a step-by-step guide to apply the BISS-CA license and extract the BISS-CA public key license.

The diagram on next page shows a summary of the registration process.


BISS-CA REGISTRATION IN Eurovision.net
I want my decoders to be authorized to receive BISS-CA
Access the «Equipment registration for BISS-CA access» site on Eurovision.net
The section «Your equipment» shows the decoders listed under your company
I do not want to request BISS CA access for any equipment, but there is some wrong data in the list I want to report
I want to request BISS CA access for decoders in the list
I want to register and authorize new equipment
Click on «ADD COMMENT» icon next to the decoder concerned
Click on «EDIT EQUIPMENT AND REQUEST BISS-CA ACCESS» icon next to the decoder concerned
Click on «REGISTER NEW EQUIPMENT FOR BISS-CA ACCESS»
You will be presented with all the information about the decoder (read-only)
Check the information prefilled in the «BISS-CA REQUEST FORM» and modify if necessary
Refer to annexes for specific instructions for RX8200
Fill the «REGISTER NEW EQUIPMENT FOR BISS-CA ACCESS FORM»
Refer to annexes for specific instructions for RX8200
Equipment type 1 (Eurovision owned equipment)
Equipment type 2 (Equipment bought from Eurovision)
Equipment type 3 – broadcaster equipment bought from another vendor
Enter a description of the modifications you wish to make
Upload decoder BISS-CA public key in the form
Enter contact details for the person responsible for the upgrade
Enter contact details for the person responsible for the upgrade
Click on «REQUEST BISS-CA ACCESS FOR THIS EQUIPMENT»
Click on «REQUEST BISS-CA ACCESS FOR THIS EQUIPMENT»
Click SUBMIT COMMENT
Accept terms of service (depending on type of device) and privacy policy
Accept terms of service and privacy policy
Install BISS-CA license provided by Eurovision on the contact mail
Extract decoder BISS-CA public key
Access the «Equipment registration for BISS-CA access» site on Eurovision.net
Click on «add BISS-CA public key» next to the relevant decoder
Upload decoder BISS-CA public key in the form and click «Submit»
Eurovision Services to check information and correct database
BISS-CA access requested

5 Other considerations

If a BISS-CA authorized decoder is reset to factory configuration, the device public key may change. Broadcasters must contact ES to verify the affected decoder's public key.

6 Contacts

In case of questions related to the BISS-CA upgrade, broadcasters can contact the dedicated BISS-CA team (BISS-CA@eurovision.net).