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# Revision Summary

<table>
<thead>
<tr>
<th>Date</th>
<th>Revision History</th>
<th>Revision Class</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/23/2018</td>
<td>1.0</td>
<td>None</td>
<td>No changes to the meaning, language, or formatting of the technical content.</td>
</tr>
<tr>
<td>8/28/2018</td>
<td>1.0</td>
<td>None</td>
<td>No changes to the meaning, language, or formatting of the technical content.</td>
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</table>
1 Introduction

This document describes the level of support provided by Microsoft Edge for the Encrypted Media Extensions specification [W3C-EME], published 18 September 2017. The [W3C-EME] recommendation extends the HTMLMediaElement interface specified in [W3C-HTML51]. It defines an API to control playback of encrypted content, supporting use cases ranging from simple clear key decryption to high value video (given an appropriate user agent implementation). License/key exchange is controlled by the application, facilitating the development of robust playback applications that support a variety of content decryption and protection technologies.

1.1 Glossary

**MAY, SHOULD, MUST, SHOULD NOT, MUST NOT:** These terms (in all caps) are used as defined in [RFC2119]. All statements of optional behavior use either MAY, SHOULD, or SHOULD NOT.

1.2 References

Links to a document in the Microsoft Open Specifications library point to the correct section in the most recently published version of the referenced document. However, because individual documents in the library are not updated at the same time, the section numbers in the documents may not match. You can confirm the correct section numbering by checking the Errata.

1.2.1 Normative References

We conduct frequent surveys of the normative references to assure their continued availability. If you have any issue with finding a normative reference, please contact dochelp@microsoft.com. We will assist you in finding the relevant information.


1.2.2 Informative References

None.

1.3 Microsoft Implementations

The following Microsoft web browsers implement some portion of the [W3C-EME] specification:

- Microsoft Edge

Each browser version may implement multiple document rendering modes. The modes vary from one to another in support of the standard. The following table lists the document modes supported by each browser version.

<table>
<thead>
<tr>
<th>Browser Version</th>
<th>Document Modes Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsoft Edge</td>
<td>EdgeHTML Mode</td>
</tr>
</tbody>
</table>

[MS-EME] - v20180828
Microsoft Edge Encrypted Media Extensions Standards Support Document
Copyright © 2018 Microsoft Corporation
Release: August 28, 2018
For each variation presented in this document there is a list of the document modes and browser versions that exhibit the behavior described by the variation. All combinations of modes and versions that are not listed conform to the specification. For example, the following list for a variation indicates that the variation exists in three document modes in all browser versions that support these modes: Quirks Mode, IE7 Mode, and IE8 Mode (All Versions)

1.4 Standards Support Requirements

To conform to [W3C-EME], a user agent must implement all required portions of the specification. Any optional portions that have been implemented must also be implemented as described by the specification. Normative language is usually used to define both required and optional portions. (For more information, see [RFC2119].)

The following table lists the sections of [W3C-EME] and whether they are considered normative or informative.

<table>
<thead>
<tr>
<th>Sections</th>
<th>Normative/Informative</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>Informative</td>
</tr>
<tr>
<td>3-12</td>
<td>Normative</td>
</tr>
<tr>
<td>13-14, A</td>
<td>Informative</td>
</tr>
</tbody>
</table>

1.5 Notation

The following notations are used in this document to differentiate between notes of clarification, variation from the specification, and points of extensibility.

<table>
<thead>
<tr>
<th>Notation</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>C####</td>
<td>This identifies a clarification of ambiguity in the target specification. This includes imprecise statements, omitted information, discrepancies, and errata. This does not include data formatting clarifications.</td>
</tr>
<tr>
<td>V####</td>
<td>This identifies an intended point of variability in the target specification such as the use of MAY, SHOULD, or RECOMMENDED. (See [RFC2119].) This does not include extensibility points.</td>
</tr>
<tr>
<td>E####</td>
<td>Because the use of extensibility points (such as optional implementation-specific data) can impair interoperability, this profile identifies such points in the target specification.</td>
</tr>
</tbody>
</table>

For document mode and browser version notation, see also section 1.3.
2 Standards Support Statements
This section contains all variations, clarifications, and extensions for the Microsoft implementation of [W3C-EME].

- Section 2.1 describes normative variations from the MUST requirements of the specification.
- Section 2.2 describes clarifications of the MAY and SHOULD requirements.
- Section 2.3 describes extensions to the requirements.
- Section 2.4 considers error handling aspects of the implementation.
- Section 2.5 considers security aspects of the implementation.

2.1 Normative Variations
The following subsections describe normative variations from the MUST requirements of [W3C-EME].

2.1.1 [MS-EME] Section 3.2 MediaKeySystemConfiguration dictionary
V0001: The label and sessionTypes types are not supported
The specification states:

```webidl
3.2 MediaKeySystemConfiguration dictionary
...
WebIDL
dictionary MediaKeySystemConfiguration {
    DOMString label = "";
    ...
    sequence<DOMString> sessionTypes;
};
```

**EdgeHTML Mode**
The label and sessionTypes types are not supported.

2.1.2 [MS-EME] Section 5. MediaKeys Interface
V0002: The setServerCertificate method does not return a Promise<boolean>
The specification states:

```webidl
5. MediaKeys Interface
The MediaKeys object represents a set of keys that an associated HTMLMediaElement can use for decryption of media data during playback. It also represents a CDM instance.
...
WebIDL
[SecureContext]
interface MediaKeys {
    MediaKeySession createSession(optional MediaKeySessionType sessionType = "temporary");
    Promise<boolean> setServerCertificate(BufferSource serverCertificate);
};
```
EdgeHTML Mode

The `setServerCertificate` method does not return a `Promise<boolean>`; instead it returns a `Promise<void>`.

2.1.3 [MS-EME] Section 5.2 Storage and Persistence

V0003: Persistence is not supported

The specification states:

5.2 Storage and Persistence

This section describes general requirements related to storage and persistence.

EdgeHTML Mode

Persistence is not supported.

2.1.4 [MS-EME] Section 6. MediaKeySession Interface

V0004: The `onkeystatuseschange` and `onmessage` events are not supported

The specification states:

6. MediaKeySession Interface

The `MediaKeySession` object represents a key session.

```webidl
[SecureContext]
interface MediaKeySession : EventTarget {
    ...
    readonly attribute MediaKeyStatusMap keyStatuses;
    attribute EventHandler onkeystatuseschange;
    attribute EventHandler onmessage;
    ...
};
```

EdgeHTML Mode

The `onkeystatuseschange` and `onmessage` events are not supported.

2.1.5 [MS-EME] Section 6.4.2 Update Key Statuses

V0005: The `keystatuseschange` event is not supported

The specification states:
6.4.2 Update Key Statuses

The Update Key Statuses algorithm updates the set of known keys for a MediaKeySession or
the status of one or more of the keys. Requests to run this algorithm include a target
MediaKeySession object and a sequence of key ID and associated MediaKeyStatus pairs.

... The following steps are run:
... 5. Queue a task to fire a simple event named keystatuseschange at the session.

**EdgeHTML Mode**

The keystatuseschange event is not supported.

### 2.1.6 [MS-EME] Section 7. HTMLMediaElement Extensions

V0006: The onwaitingforkey event is not supported

The specification states:

7. HTMLMediaElement Extensions

This section specifies additions to and modifications of the HTMLMediaElement [HTML51]
when the Encrypted Media Extensions are supported.

... WebIDL

    partial interface HTMLMediaElement {
        [SecureContext]
        readonly attribute MediaKeys? mediaKeys;
        ...
        attribute EventHandler onwaitingforkey;
    };

**EdgeHTML Mode**

The onwaitingforkey event is not supported.

### 2.2 Clarifications

There are no clarifications of the MAY and SHOULD requirements of [W3C-EME].

### 2.3 Extensions

The following subsections describe extensions to the requirements of [W3C-EME].

### 2.4 Error Handling

There are no additional error handling considerations.

### 2.5 Security

There are no additional security considerations.
3 Change Tracking

No table of changes is available. The document is either new or has had no changes since its last release.
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