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## Multiple Ethernet - IPv6 mapped IPv6 address (ME6A)

### Abstract

This document specifies Multiple Ethernet - IPv6 mapped IPv6 address(ME6A) specification. ME6A is an Ethernet-mapped IPv6 address with a plane ID. Unique allocation of plane id value enables duplicated MAC address unique in IPv6 address space. This address may use Ethernet over IPv6 encapsulation.

### Requirements Language

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [RFC 2119](#) [[RFC2119](#)].

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## 1. Introduction

This document specifies Multiple Ethernet - IPv6 mapped IPv6 address(ME6A) specification. ME6A is an Ethernet-mapped IPv6 address with a plane ID. Unique allocation of plane ID value enables duplicated MAC address unique in IPv6 address space.

This address may use Ethernet over IPv6 encapsulation such as Multiple Ethernet - IPv6 mapping encapsulation - fixed prefix (ME6E-FP) [[I-D.draft-matsuhira-me6e-fp](#)] and Multiple Ethernet - IPv6 mapping encapsulation - prefix resolution (ME6E-PR) [[I-D.draft-matsuhira-me6e-pr](#)].

## 2. ME6A architecture

[Figure 1](#) shows ME6A architecture.



Figure 1

ME6A consists of three parts as follows.

**ME6A prefix**

ME6A prefix. This value is fixed value with M46E-FP, and non fixed value with M46E-PR.

**Ethernet plane ID**

Ethernet network plane ID is the network identification of Ethernet network plane.

**Ethernet address**

Ethernet MAC address. EUI-48 address or EUI-64 address.

**3. IANA Considerations**

This document does not request IANA.

Note to RFC Editor: this section may be removed on publication as an RFC.

**4. Security Considerations****5. Normative References**

[I-D.draft-matsuhira-me6e-fp] Matsuhira, N., "Multiple Ethernet - IPv6 mapping encapsulation - fixed prefix", 1 June 2019.

[I-D.draft-matsuhira-me6e-pr] Matsuhira, N., "Multiple Ethernet - IPv6 address mapping encapsulation - prefix resolution", 1 June 2019.

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, DOI 10.17487/RFC2119, March 1997, <<https://www.rfc-editor.org/info/rfc2119>>.

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