Dynamic Reassignment of IP Addresses for TCP and UDP

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draft-bound-ipv6-ip-addr-00.txt
March 4-8, 1996
IETF Meeting
Omni Center Hotel
Los Angelos, CA

Topics

- Whats the problem?
- Whats the Objective of this work?
- New Terminology and Defintitions.
- Reassign Destination Option.
- Protocol Operation.
- Issues for futher Discussion.
- Next Steps.

Whats the Problem?

- **Transport Connections that Expire when the Address becomes invalid.**
- **Anycast Addresses cannot be used as a Source Address.**
- **We don’t want to change TCP and UDP.**

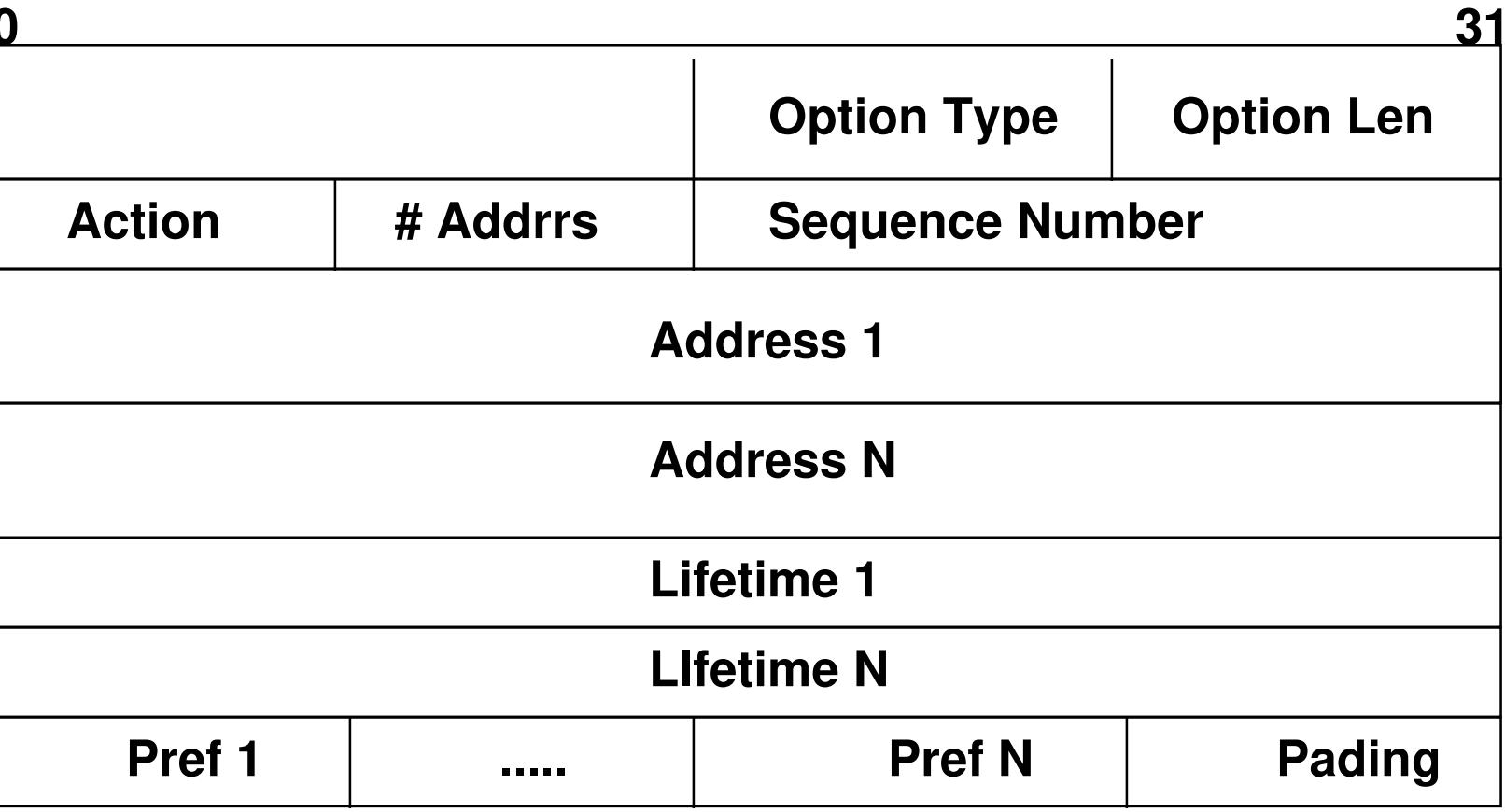
Whats the Objective of this Work?

- **Dynamic Reassignmet of IP Addresses between two communicating end-systems.**
- **Use IPv6 Destination Option to notify Hosts of a Peer Hosts Address Set View and any Change to the Address being used for a transport connection.**
- **Support the use of Anycast Addreses, Dyanmic Renumbering, Multihoming, and Mobile communications in IPv6.**

New Terminology and Definitions

- Peer Host
- Address Set
- Address Set View
- Address Preference
- Peer-Destination-Cache

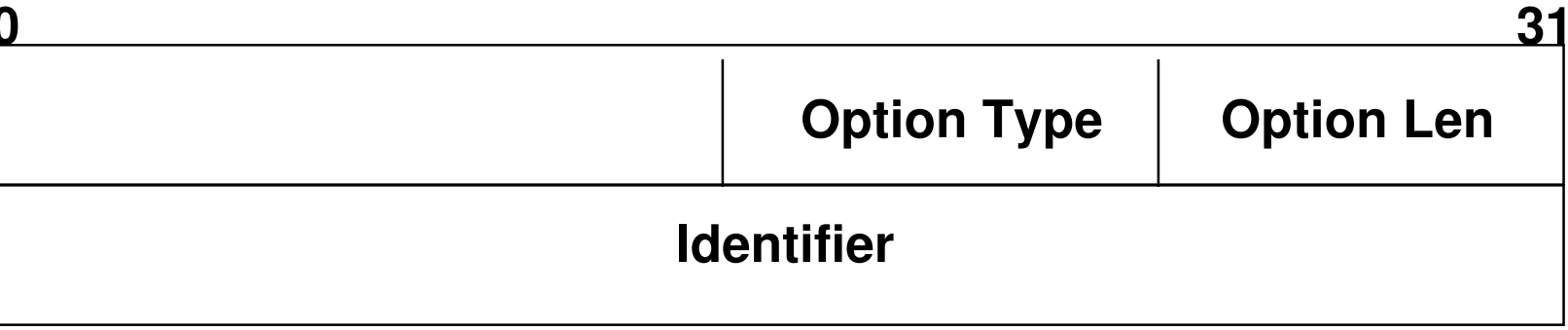
Reassign Option



Actions

- **Replace**
- **New Set**
- **Acknowledge**
- **Acknowledge Reply**

Identificaton Option



Protocol Operation

- **Address Lifetimes.**
- **Destination Address Selection.**
- **Source Address Selection.**
- **Update Acknowledgment.**
- **Peer-Destination-Cache Management.**
- **Applicability.**

Issues for Further Consideration

- Indications from Network-Transport and Transport-Network.
- Application notification and bind (*) to Addressses.
- ICMPv6 used to lower Address Preferences.
- Security Mechanisms.
- Choice of Destination Address when higher preference addresses are present.
- Conceptual Model for Implementation.

Next Steps

- **IPng WG Work In Progress for this specification.**
- **Resolve Further Considerations on IPng Mail List.**
- **New Draft for Review April 1996.**
- **Complete Model presented at IETF Montreal June 24-29, 1996.**
- **Anycast Addresses supported in the IPv6 Addr Arch Specification for Hosts.**
- **Implementation Prototypes June-December 1996.**