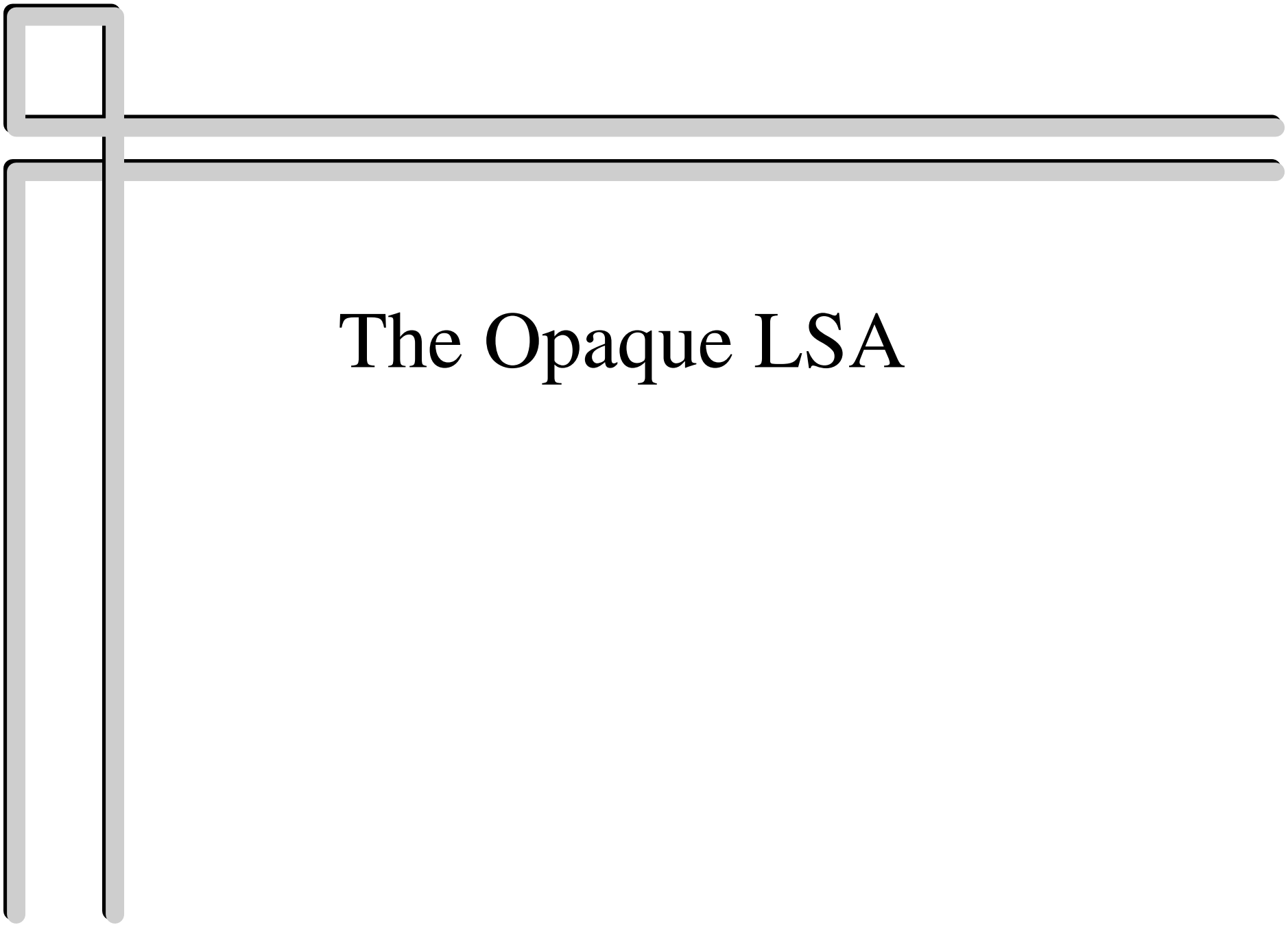

The Opaque LSA

Opaque LSA

- Goal Is To Add Mechanism For Future Extensibility
  - The OSPF External Attribute
  - Could Have Been Used By *MOSPF* And *Demand Circuit* Extensions
  - QoS Information?
- May Be Used By OSPF Or Not
  - i.e., BGP Path Information
- Format Is OSPF LSA Hdr (Type 15) Followed By Some Number Of Octets
  - 32-bit Aligned

Flooding Scope

- Link-Local = 0
  - Not Flooded Beyond Local Network
  - LSA Includes IP Interface Address And Mask
  - Modification To DB Exchange To Exclude Opaque If Nbr Not On Link-Local Network
- Area-Local = 1
  - Not Flooded Beyond Area
- Domain-Local = 2
  - Information Not Flooded Beyond Domain
- Beyond Domain >= 3

Flooding

- Opaque Option (The “O” bit)
  - Maybe Use The EA-bit
- Opaque LSA Is Not Flooded To Nbr Unless
  - Opaque Option Is Supported
  - Scoping Rules Allow
- Router Learns Of Nbr’s Support For Opaque When DD Packet Is Received
- Opaque LSAs Not Sent To Nbr Or Put On RT List Unless Opaque Option Is Supported

Opaque Link-State ID

- Subdivided Into:
  - Opaque Type (First 8 Bits)
  - Opaque ID (Remaining 24 Bits)