

# The MANET Link Type

`draft-clausen-manet-linktype-00`

# History

draft-ietf-autoconf-manetarch

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- IETF'67 - “MANET Architectural Proposal”
  - rough consensus at that time (?) for that approach

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- Dec. '07 - publication requested

# History

draft-ietf-autoconf-manetarch

- IETF'67 - “MANET Architectural Proposal”
  - rough consensus at that time (?) for that approach
- Sept. '07 - WGLC
- Dec. '07 - publication requested
- IETF'71 - “animated discussion” re. PS
  - request for “link type” document

# Background - why?

- D.Thaler:
  - `draft-iab-ip-model-evolution-01`
- This I-D:
  - Unofficially “Commissioned work” at IETF’72
  - Aims to adhere to Thaler I-D observations

# Status

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- Obviously, work in progress
- Credits, pre-publication:
  - thought-provoking feedback from
    - Narten, Dearlove, Chakeres, Perkins, Arkko, Herberg
  - Obviously: Thaler's ID

# Content

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- Background Stuff:
  - MANET “node taxonomy”
  - MANET Interfaces
  - MANET Network Dynamics
- Link Type Stuff:
  - Symmetry, transitivity, continuity
  - Subnet model and addresses
  - Multicast and broadcast scopes
- Addressing Architecture

# Content

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- Background Stuff:

- MANET “node taxonomy”

- MANET Interfaces

- MANET Network Dynamics

- Link Type Stuff:

- Symmetry, transitivity, continuity

- Subnet model and addresses

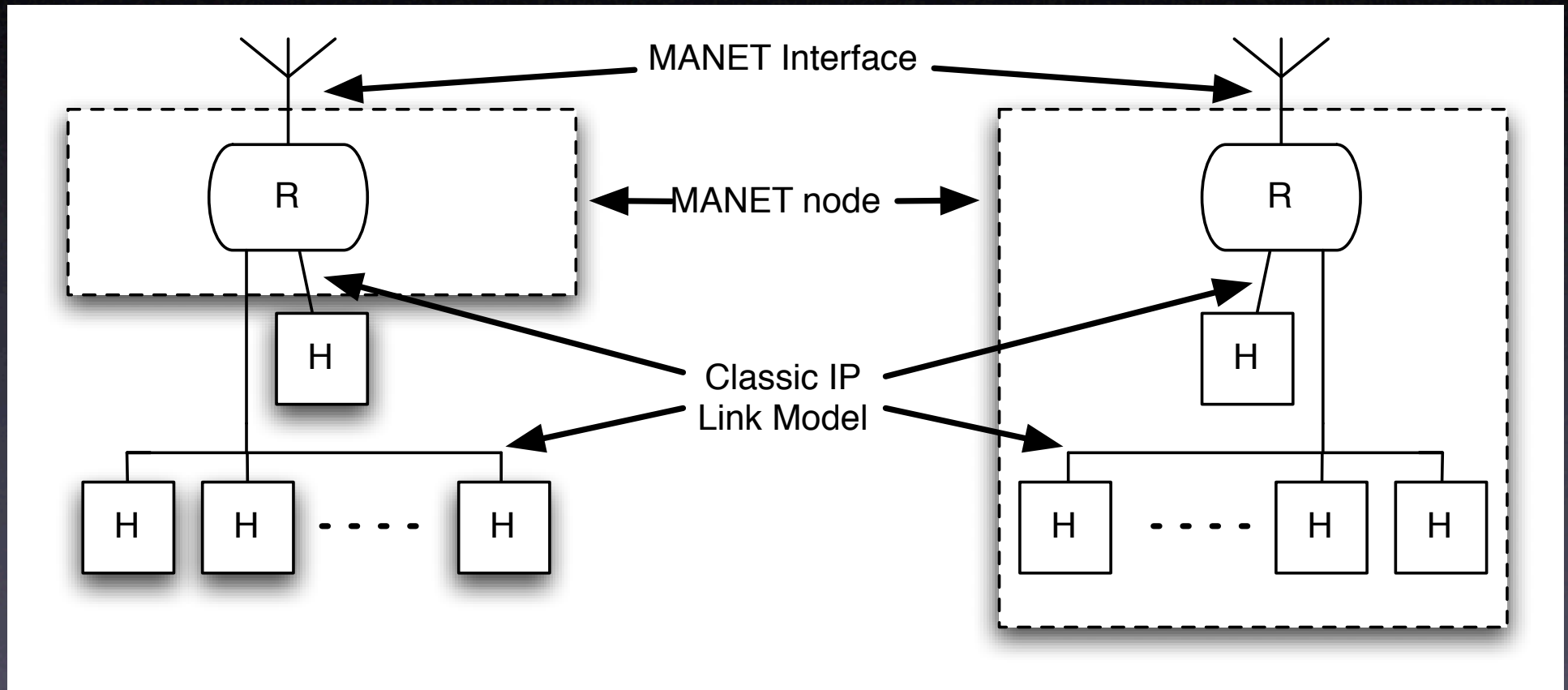
- Multicast and broadcast scopes

- Addressing Architecture

Essentially, from  
IETF'67 presentation

# Node Taxonomy

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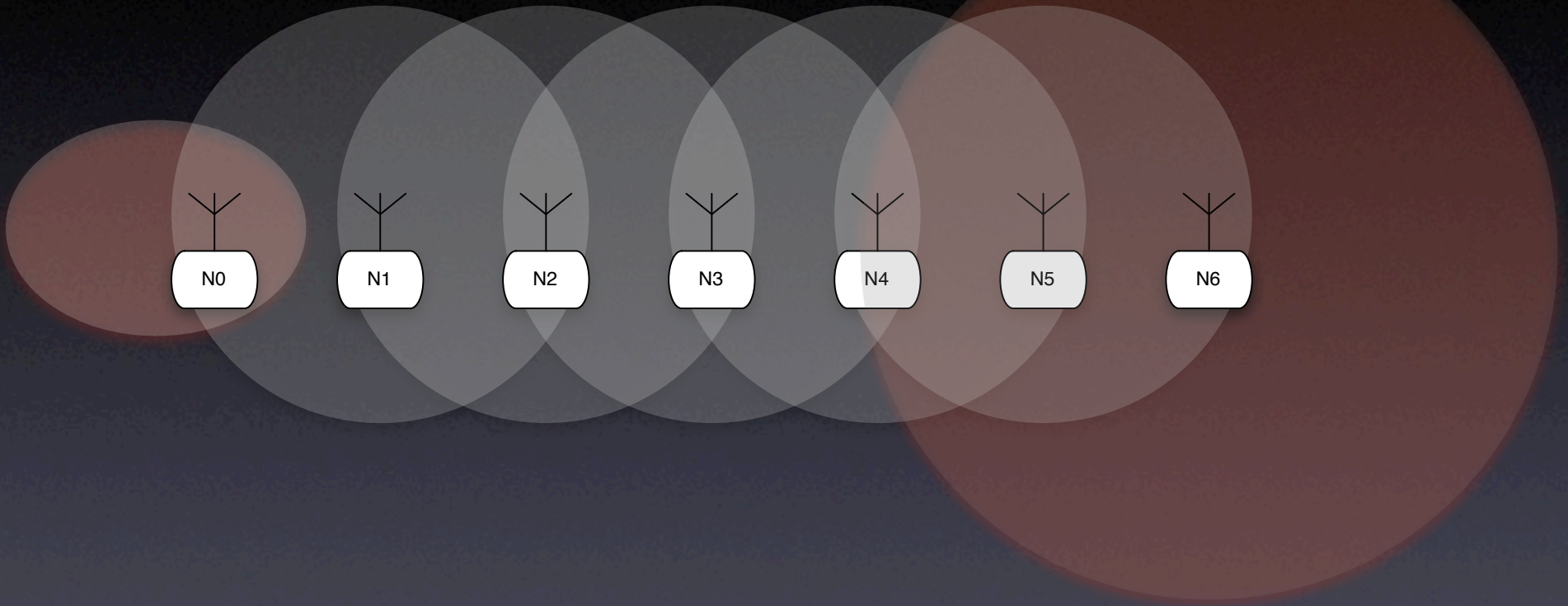


Essentially, from

Thomas@ThomasClausen.org IETF'67 presentation <http://www.ThomasClausen.org>

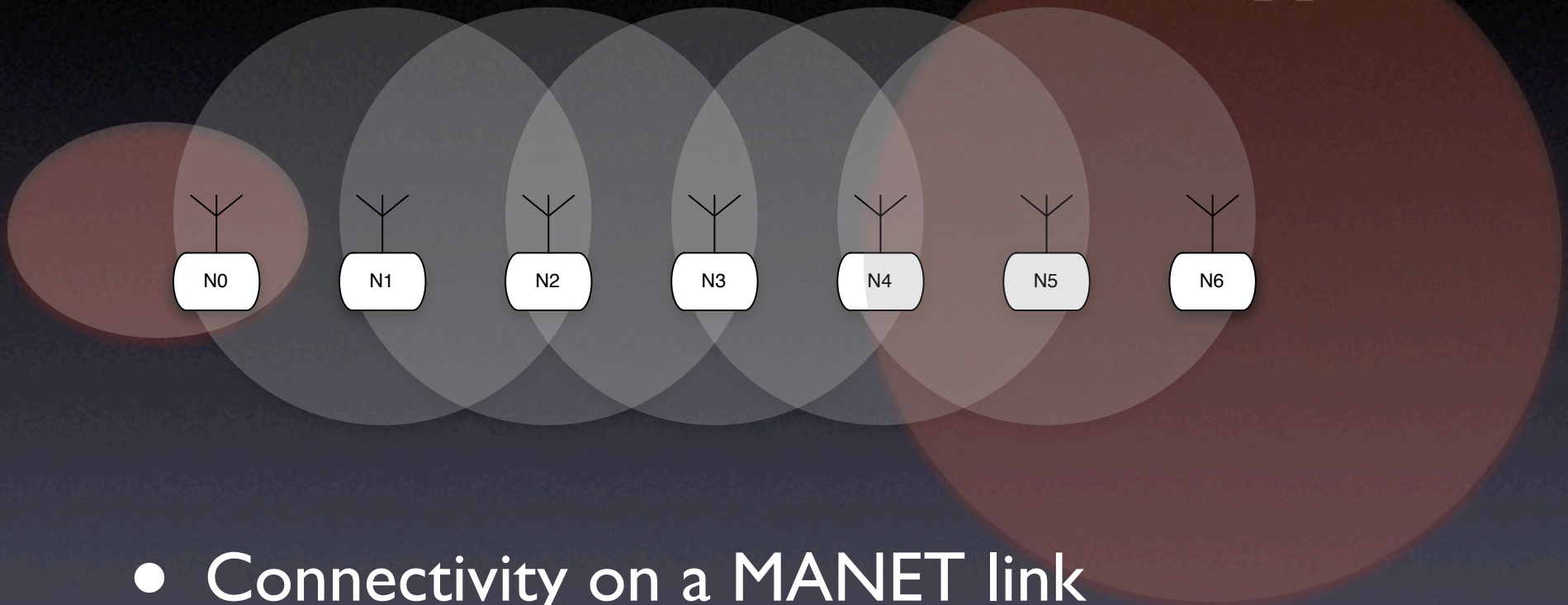
# MANET Interfaces

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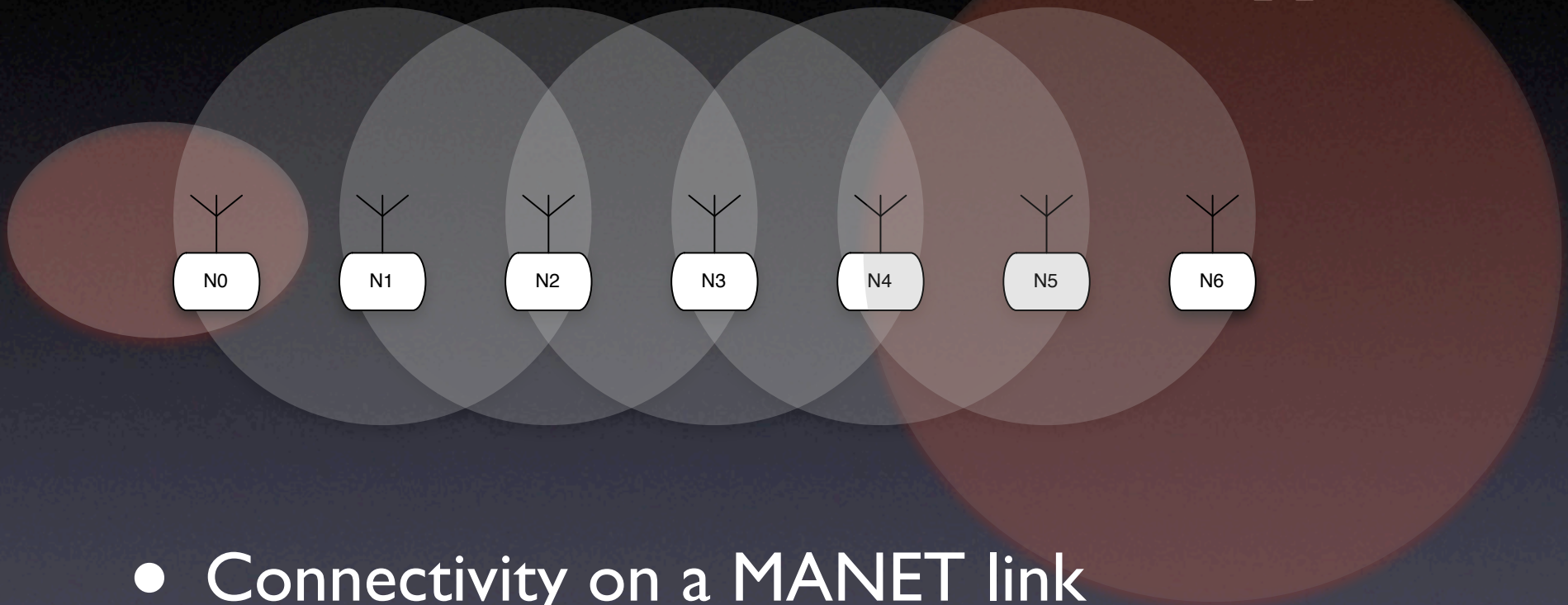


- Connectivity on a MANET link



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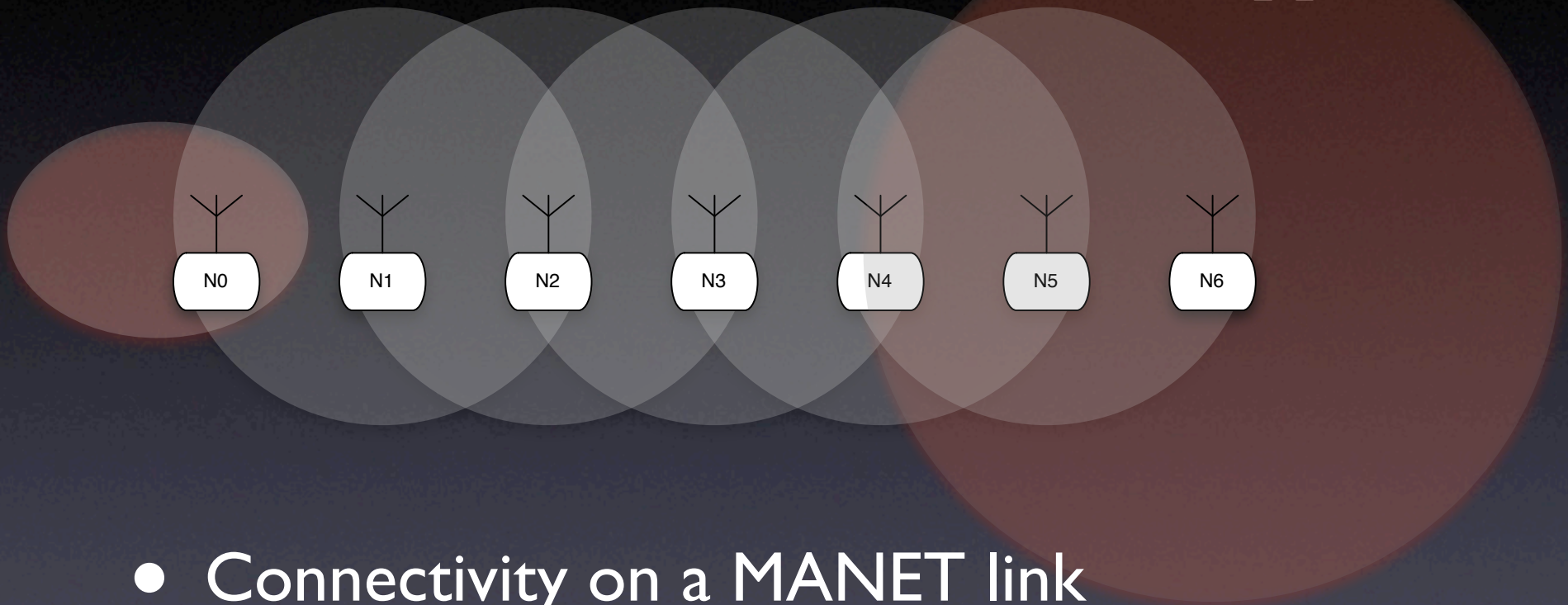
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  - can not be assumed symmetric

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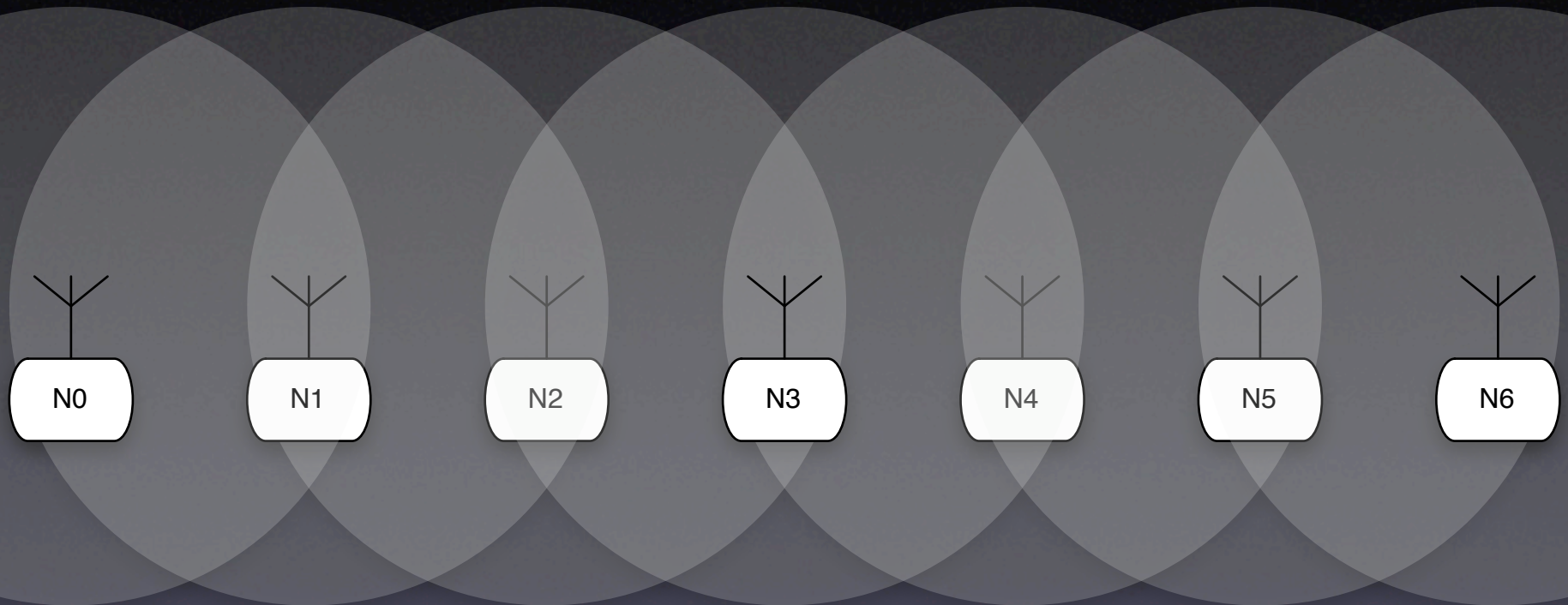
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- Connectivity on a MANET link
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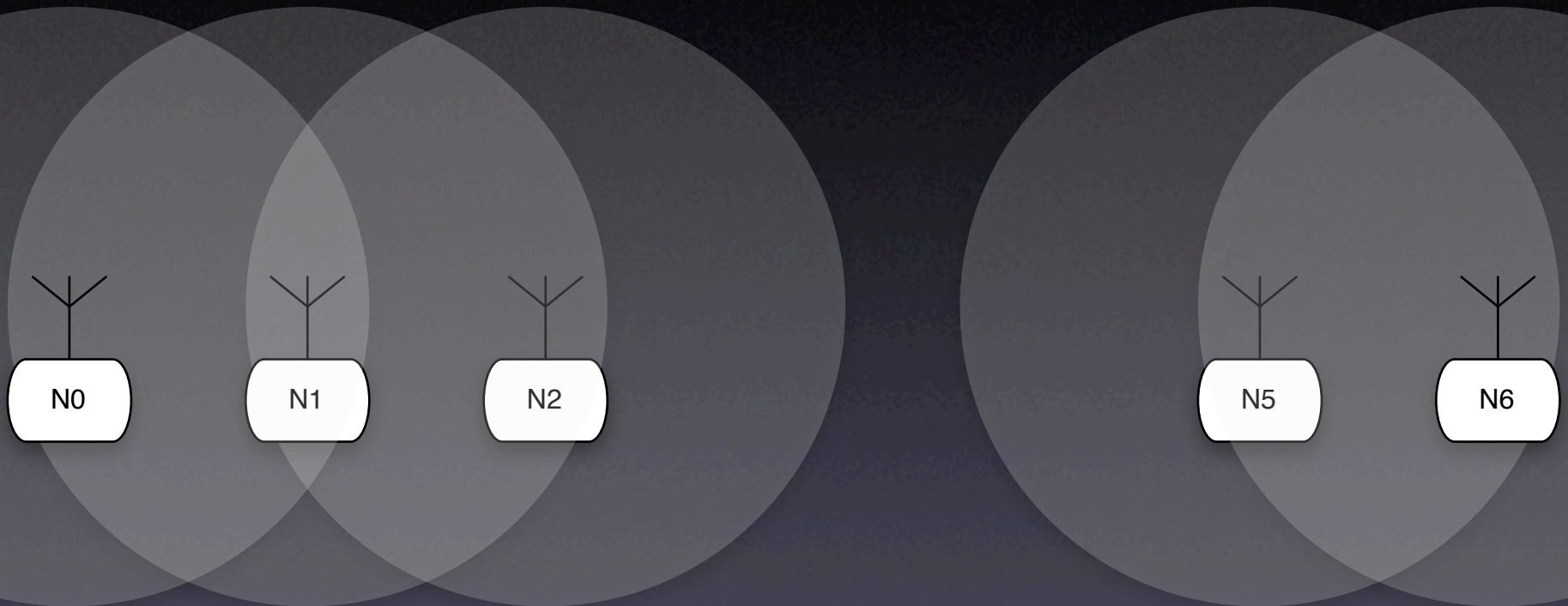
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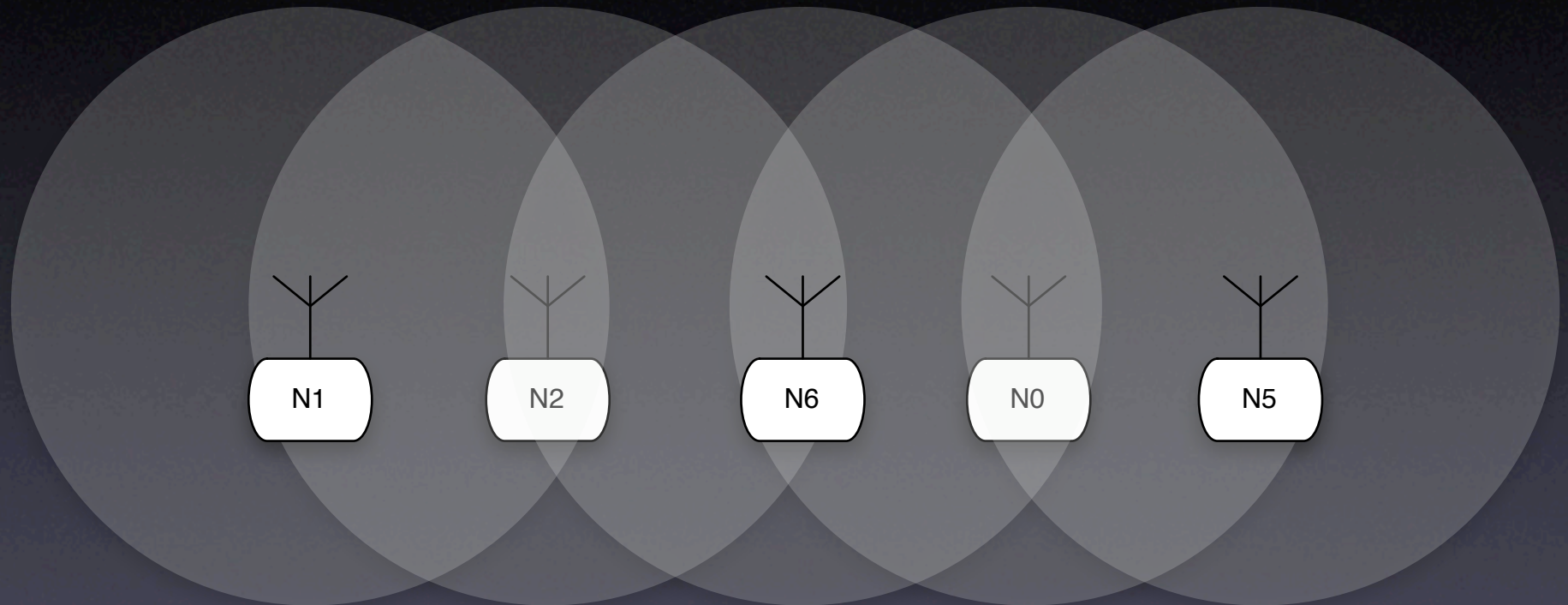
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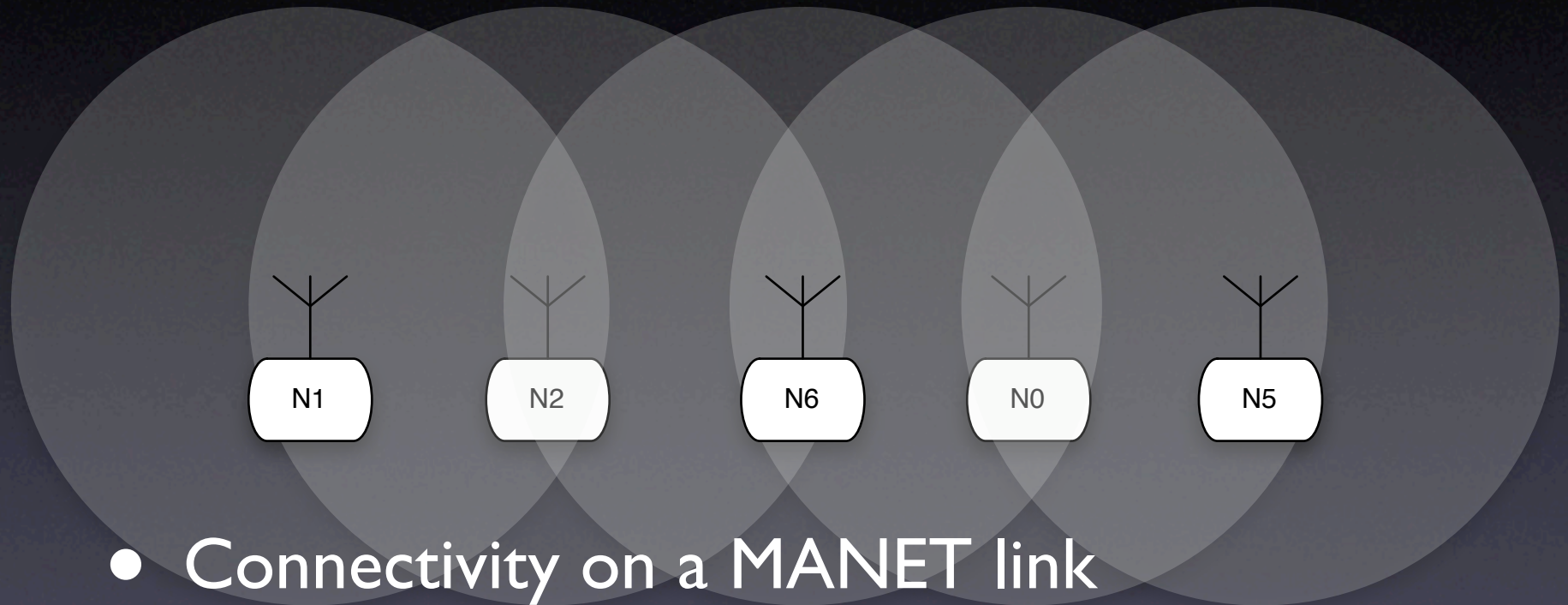
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# Network Dynamics

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- Connectivity on a MANET link
  - can not be assumed continuous
  - not even between “neighbors”
  - not discrete connectivity events

# Subnets - Addresses

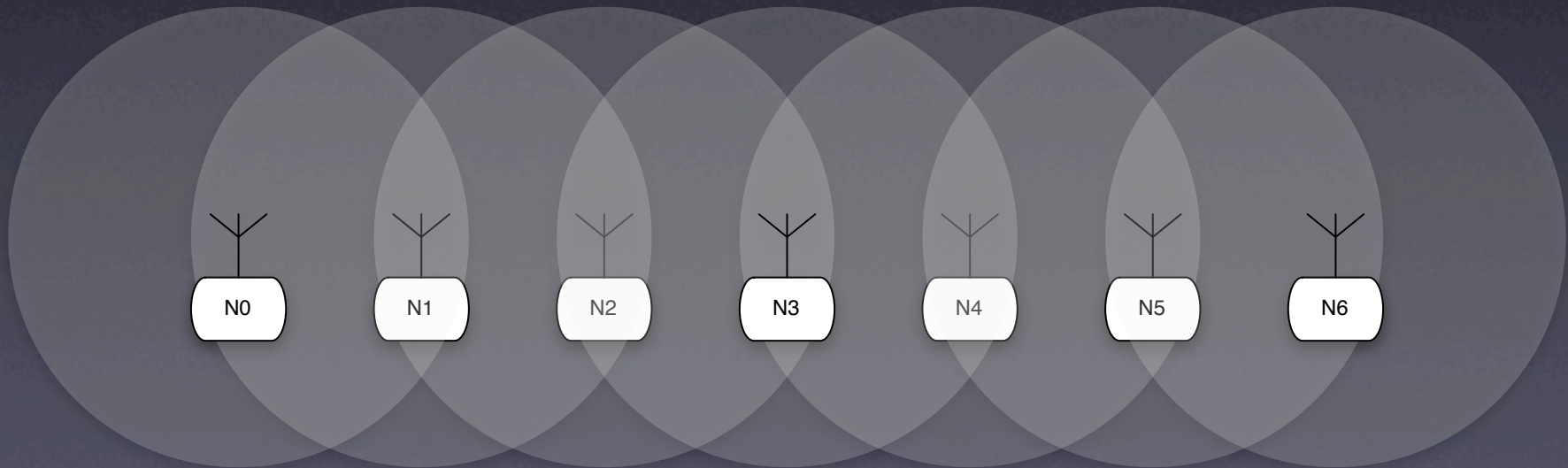
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- **`draft-iab-ip-model-evolution-01`**
  - “a subnet is smaller than, or equal to a link”
  - “destinations with addresses in the same subnet can be reached with TTL = 1”

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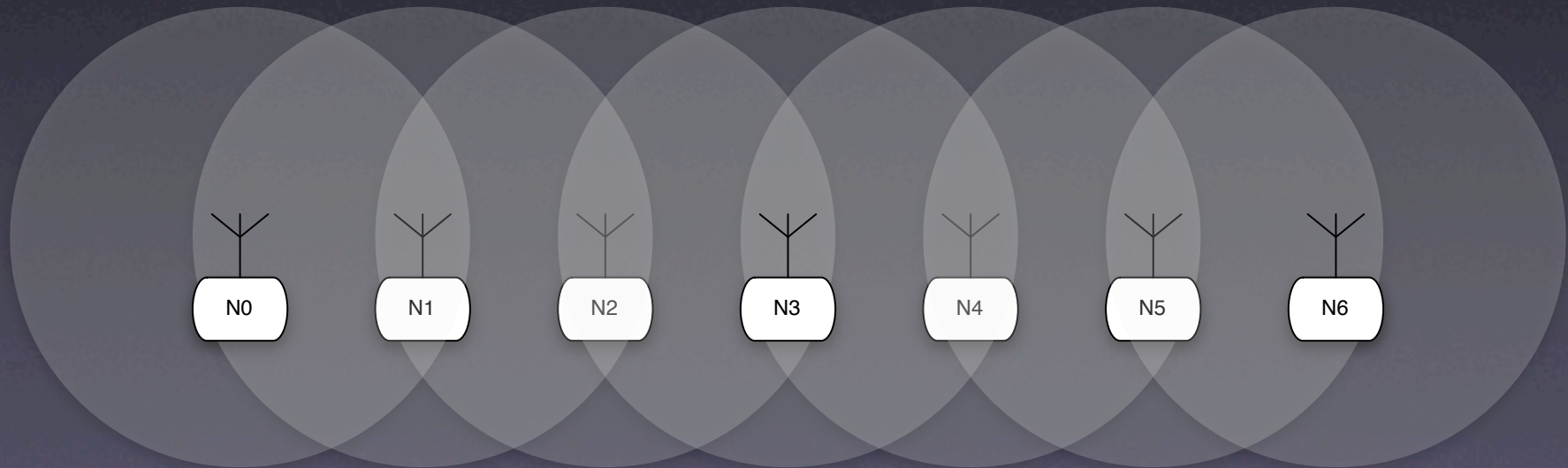
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# Multi/broadcast

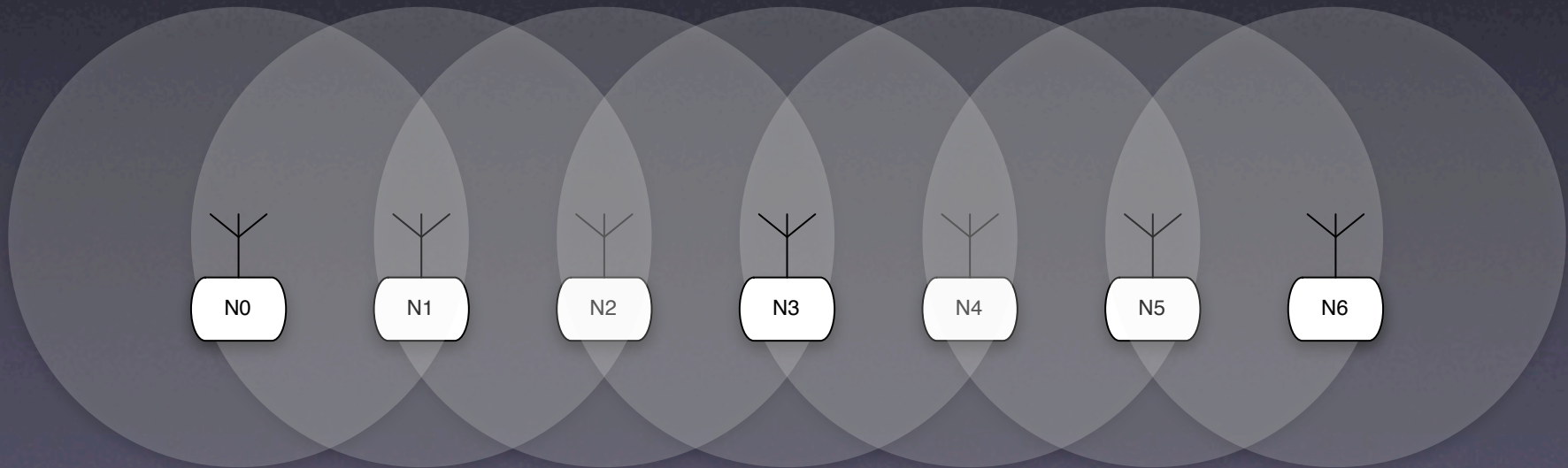
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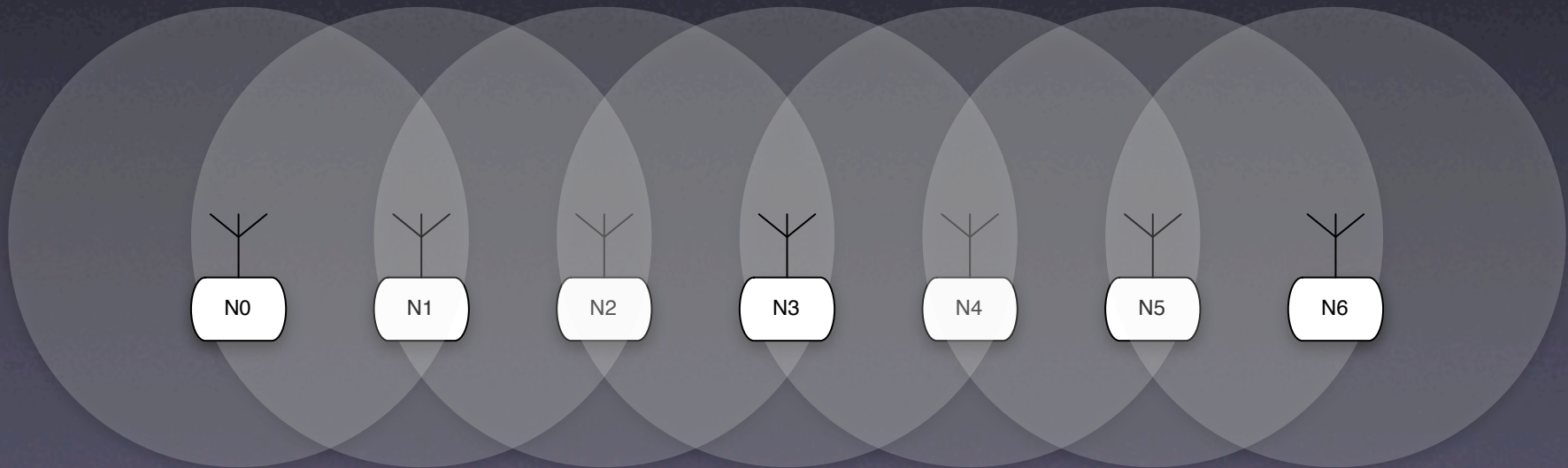
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- MANET: “Neighborcast”



# Characteristics

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- Point of attachment entails network view
- Link Local multicast/broadcast:
  - becomes “neighborcast”
- Subnet/addressing:
  - a subnet is smaller than a MANET Link
  - addresses can not be assumed part of an on-link subnet



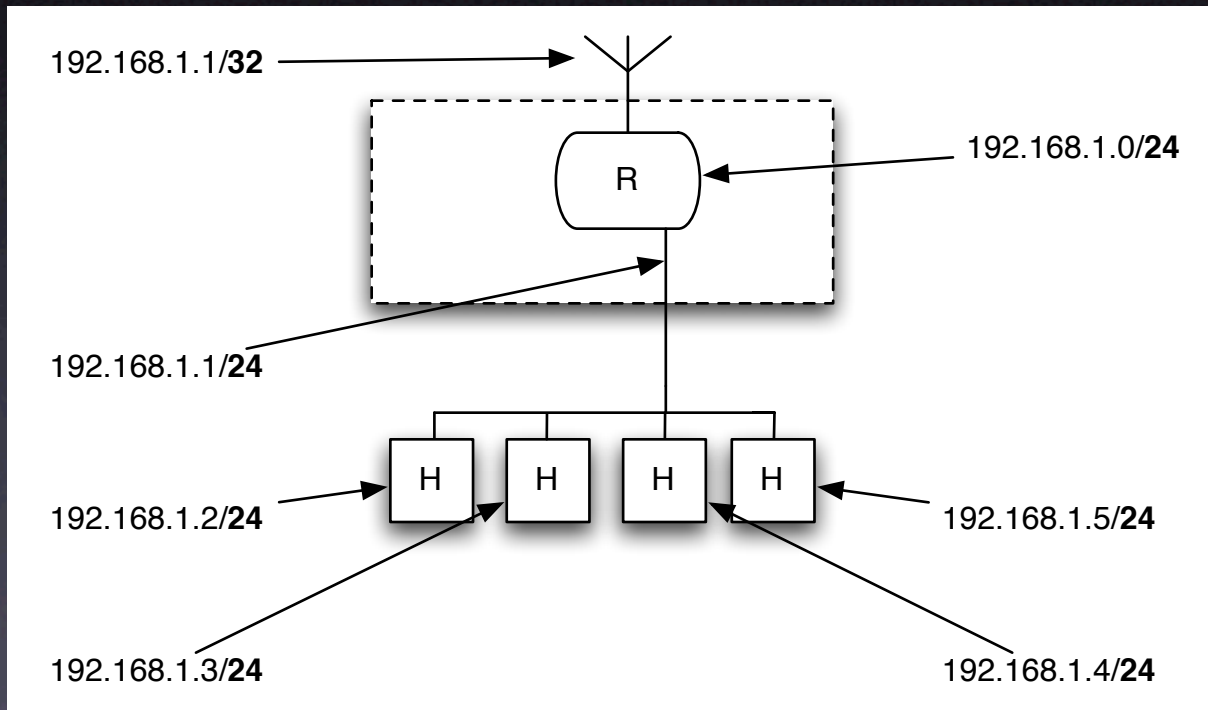
# Consequences

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- MANET Interface Configuration:
  - no two MANET interfaces shall appear within the same subnet
  - i.e. with the same prefix and prefix length
- Non-MANET interface configuration:
  - NO consequences
  - Business entirely as usual

# Addressing

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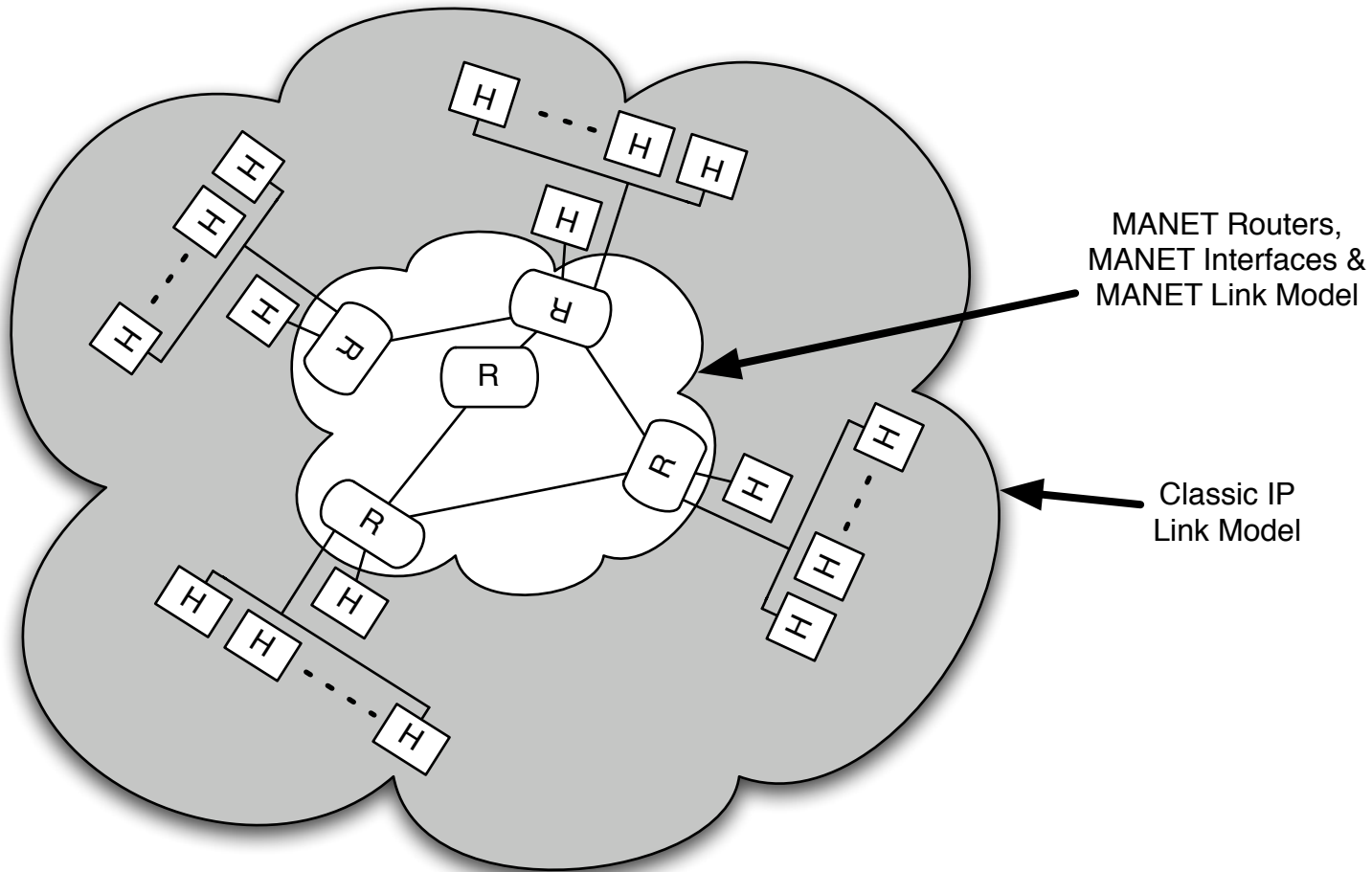
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# Features

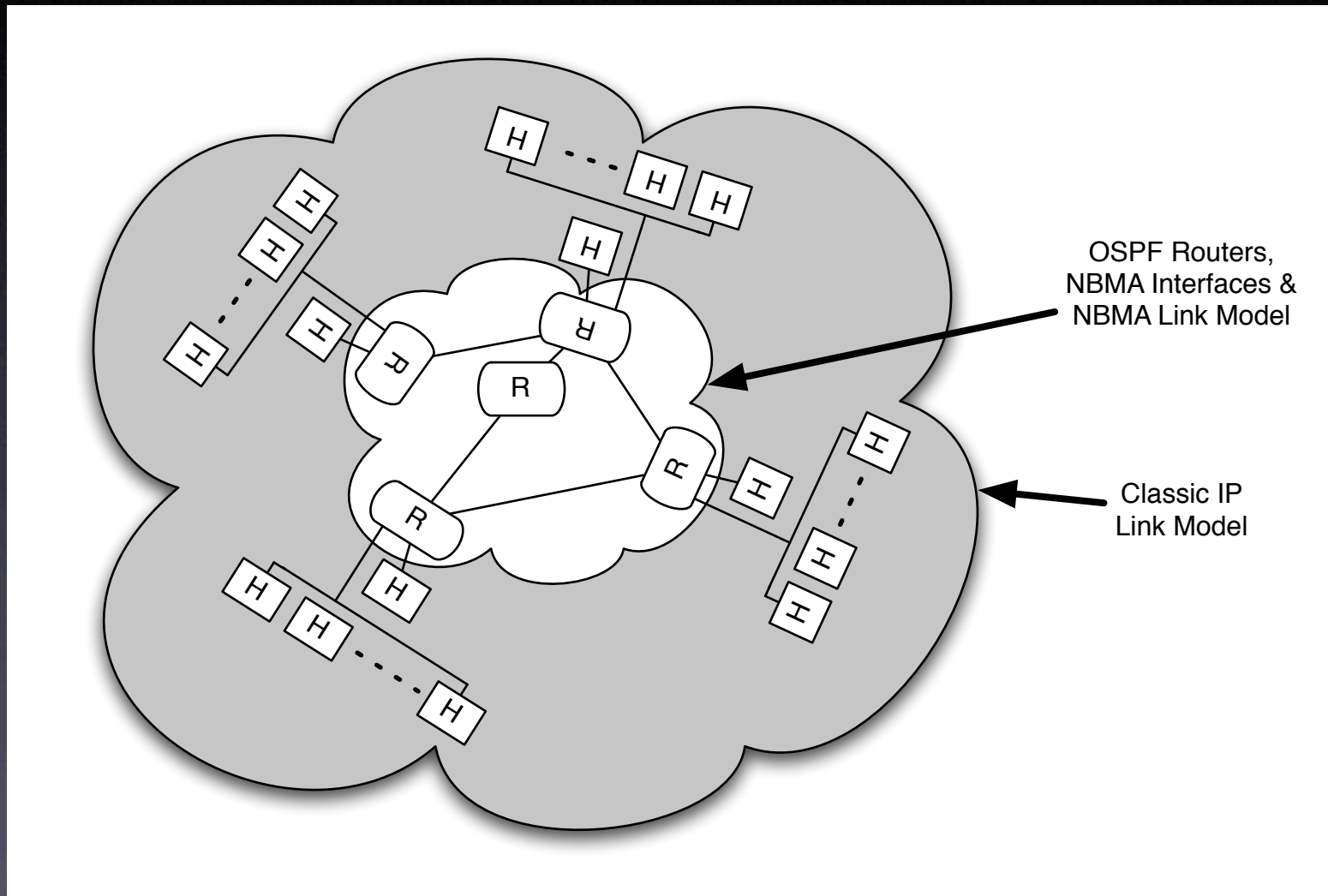
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- MANET Interface and MANET Link Type
  - one IP hop away from any “hosts”
  - “hides” MANET characteristics
    - similar to e.g. NBMA behind OSPF router
- Inclusive
  - an Ethernet works a perfectly fine MANET Link

# How it really looks?



# Looks Familiar?





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<http://www.ThomasClausen.org>