



# Requirements for RPR Interoperability

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# Why Have Interoperability?

- The success of the IEEE 802.17 RPRWG will be measured based on the impact this new ring based MAC protocol has on the Internet and its overall market acceptance
- Market acceptance will require interoperability between systems from different vendors
  - Equipment users prefer to have multiple suppliers
  - Plug in an Ethernet cable and it works (mostly)
- Different types of equipment will exist on the same ring
  - bridges, routers, servers, test-sets



# Interoperability Requirements

- MAC Layer
- Physical Layer
- Management Layer



# MAC Layer

- Frame format

Not all boxes have to terminate all frame or payload types but must be able to pass them through

- Topology discovery
- Protection switching
- Bandwidth Management protocol



# Physical Layer

- Both ends of a span must be the same physical layer
  - Bit rate
  - Line coding
  - Encapsulation / frame delineation
  - Compatible clocking
    - frequency tolerance
    - clock is local to a span
      - allowing local or one end loop-timed



# Management Layer

- SNMP

Minimum and “optional” set of statistics for RPR MIB

# Migrating to Higher Ring Speeds

- Split ring into two LAN segments
- Upgrade ring span by span

