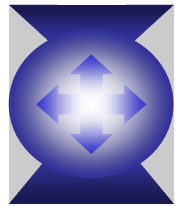# RPR Requirements

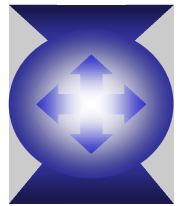IEEE 802 Resilient Packet Ring Study Group

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Ring aware MAC

- ◆ **Define RPR MAC sublayer to address packet distribution and collection in a ring network**
  - – Define RPR MAC sublayer interfaces to MAC and MAC Client as well as management entity
  - – Fast Transit Path

- ◆ **Fast response to link failures without the need for layer 3 re-route**

- ◆ **Support Full Duplex 1000Base-x and 10GBase-x media**
  - – Support Ethernet packets

- ◆ **Support SONET media**

Predictable Performance

- **Fair and dynamic distribution of available bandwidth**
  - Unused bandwidth reclaimed and distributed fairly (proportionally) to active conversations
- **Traffic Management**
  - Predictable bandwidth and delay characteristics per conversation
- **Distributed Congestion Management**
  - Each node represents a congestion point
  - Manage over-subscription
- **Efficient Multicast and Broadcast support**
- **Plug and play**
  - Topology discovery
  - Automatic configuration
  - Fast response to node (end station) insertion and removal