The Need for Supporting Lower than OC-48 Rates in RPR

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Motivation

Interoperation with other services

Gradual migration

Non-goal: Supporting physical infrastructures of lower speeds. This will probably not be an issue when RPR is finalized

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Deployment Scenarios

Deployment of RPR rings as an overlay over an existing rings (e.g. OC48/STM4) in the access network

Allocating just part of the ring for RPR. That is, new services, enabled by RPR, will be gradually offered

Coexistence with other services (e.g. TDM)

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Operator s Perspective

To allow migration and gradual offering of new services we should not exclude such configurations

The industry move to RPR should be driven by business goals and not constrained by technology limitations

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General Approach

The model should be one where the RPR MAC *uses* the PHY as opposed to *owning* it

Using Virtual Concatenation (HO), RPR can use part of the pipe as a clear channel (e.g. OC-36c Vs. channelized)

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Issues to Consider

Having a wider scope for RPR, will require us to develop more PHY interfaces

Nailing down the right size of various PM counters will be tougher since there is a wider range of PHY rates

More?

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Proposal

In the RPR MAC definition:

- Do not exclude the possibility to operate over OC3/STM1, OC12/STM4 PHYs

In the PHY interface work, add:

- Support for OC3/STM1 and OC3/STM12
- Support Virtual Concatenation

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Thank You

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