

# BoD Service with Vcat, Lcas and GMPLS

April 11 2008

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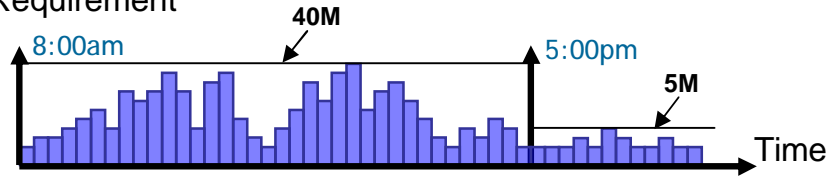
Advanced Technologies Department,  
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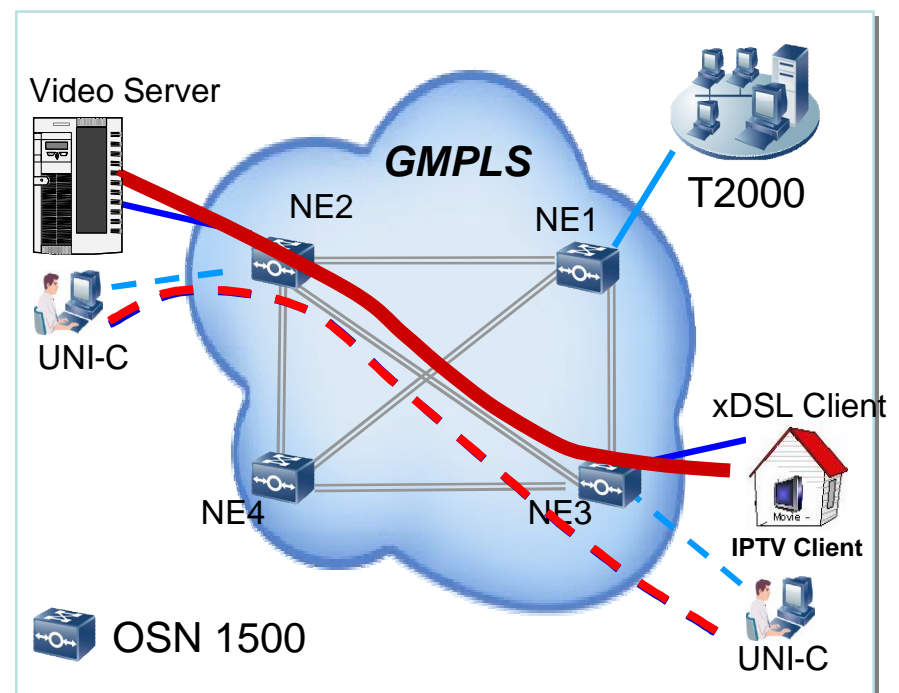
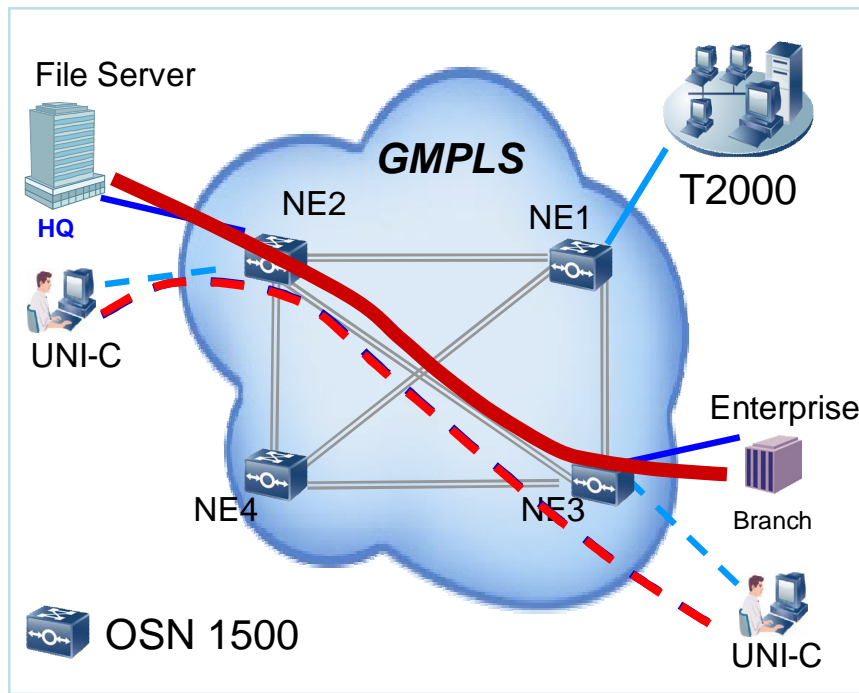
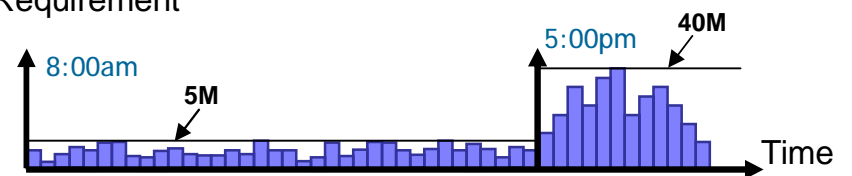


# BoD Application Scene

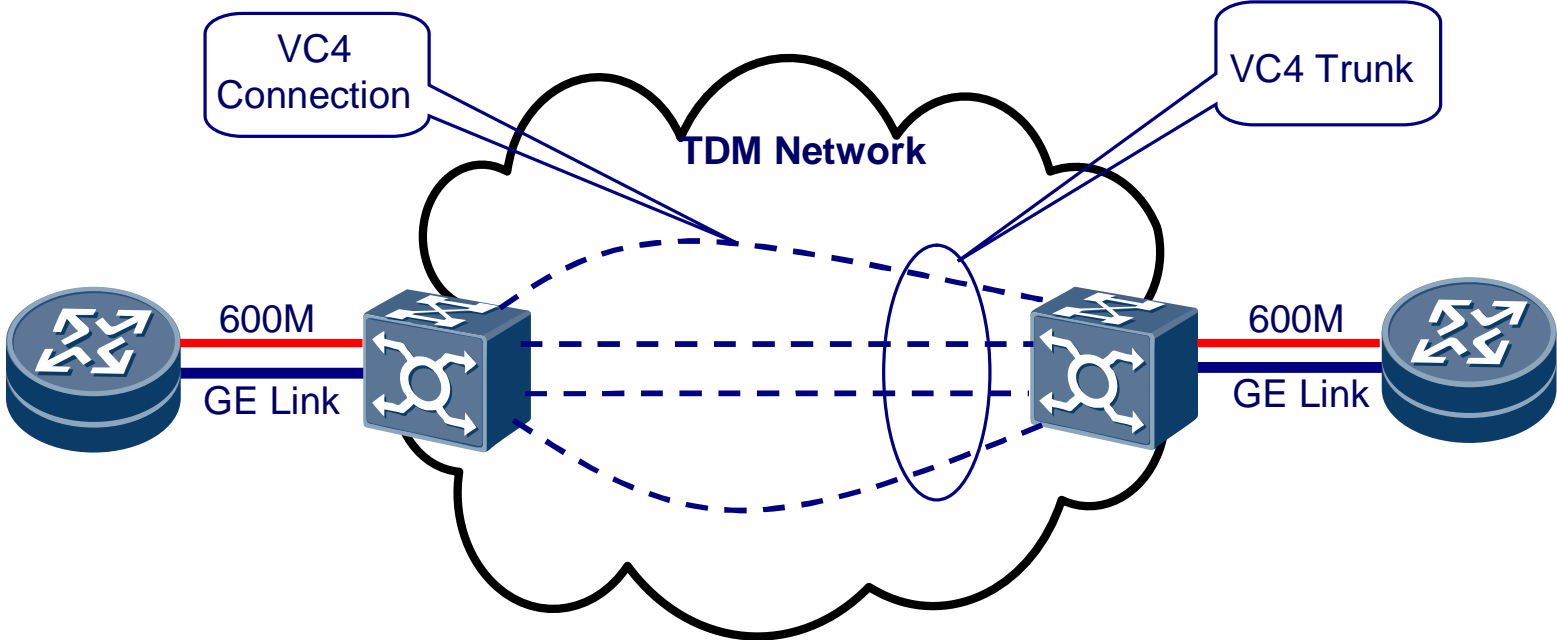
Enterprise Bandwidth Requirement



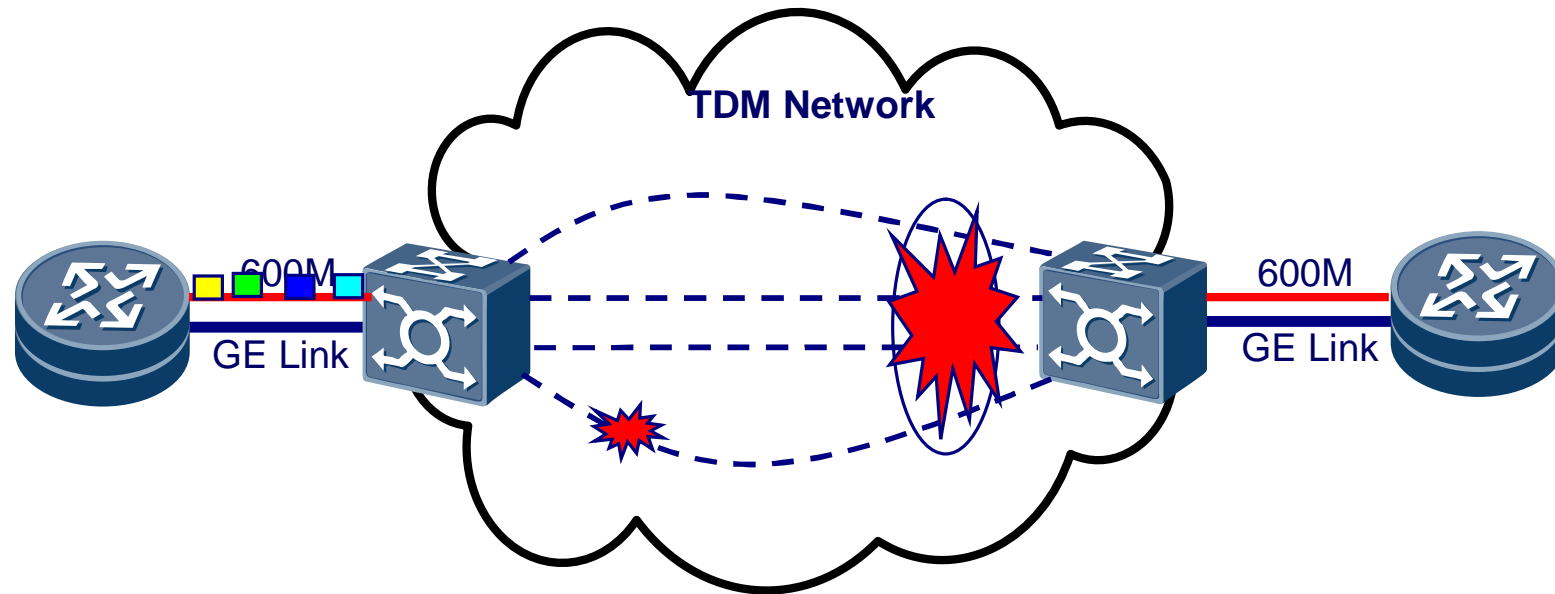
Resident Bandwidth Requirement



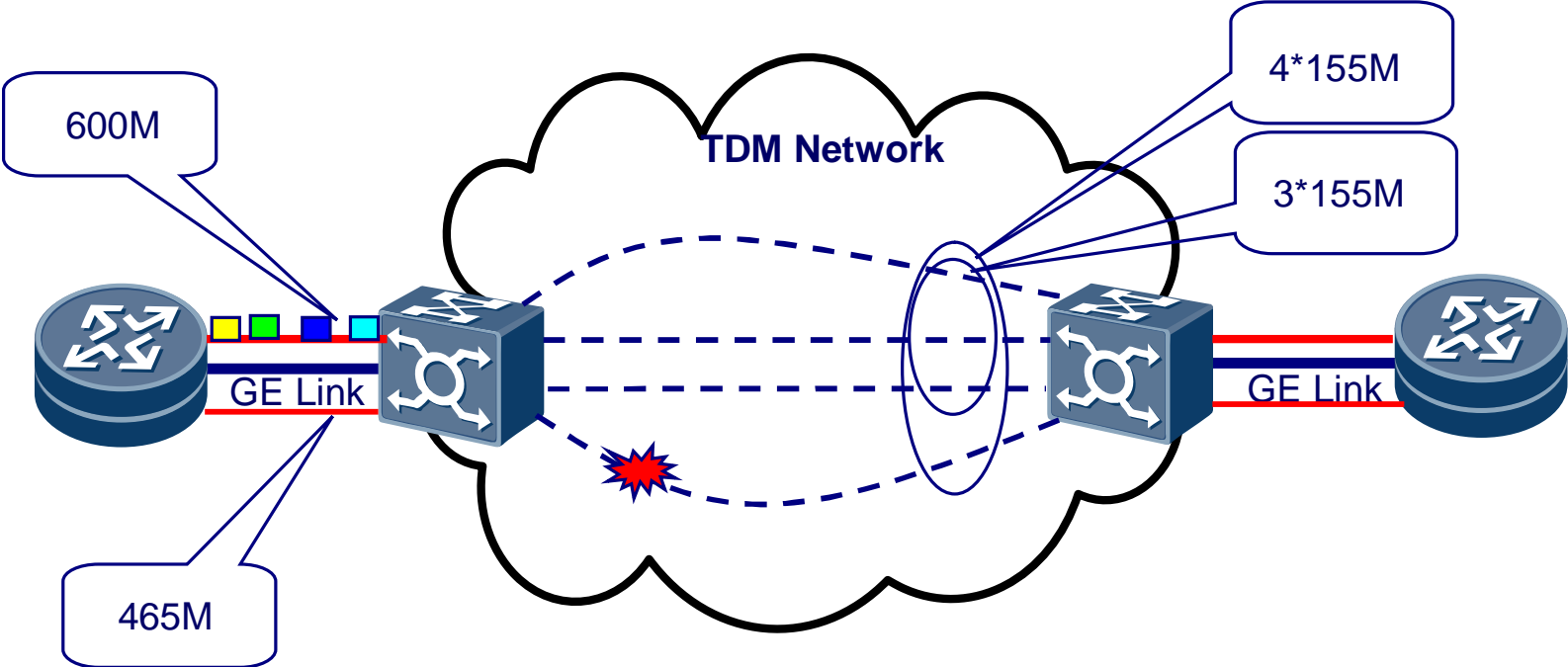
# VCAT Technology in TDM Network



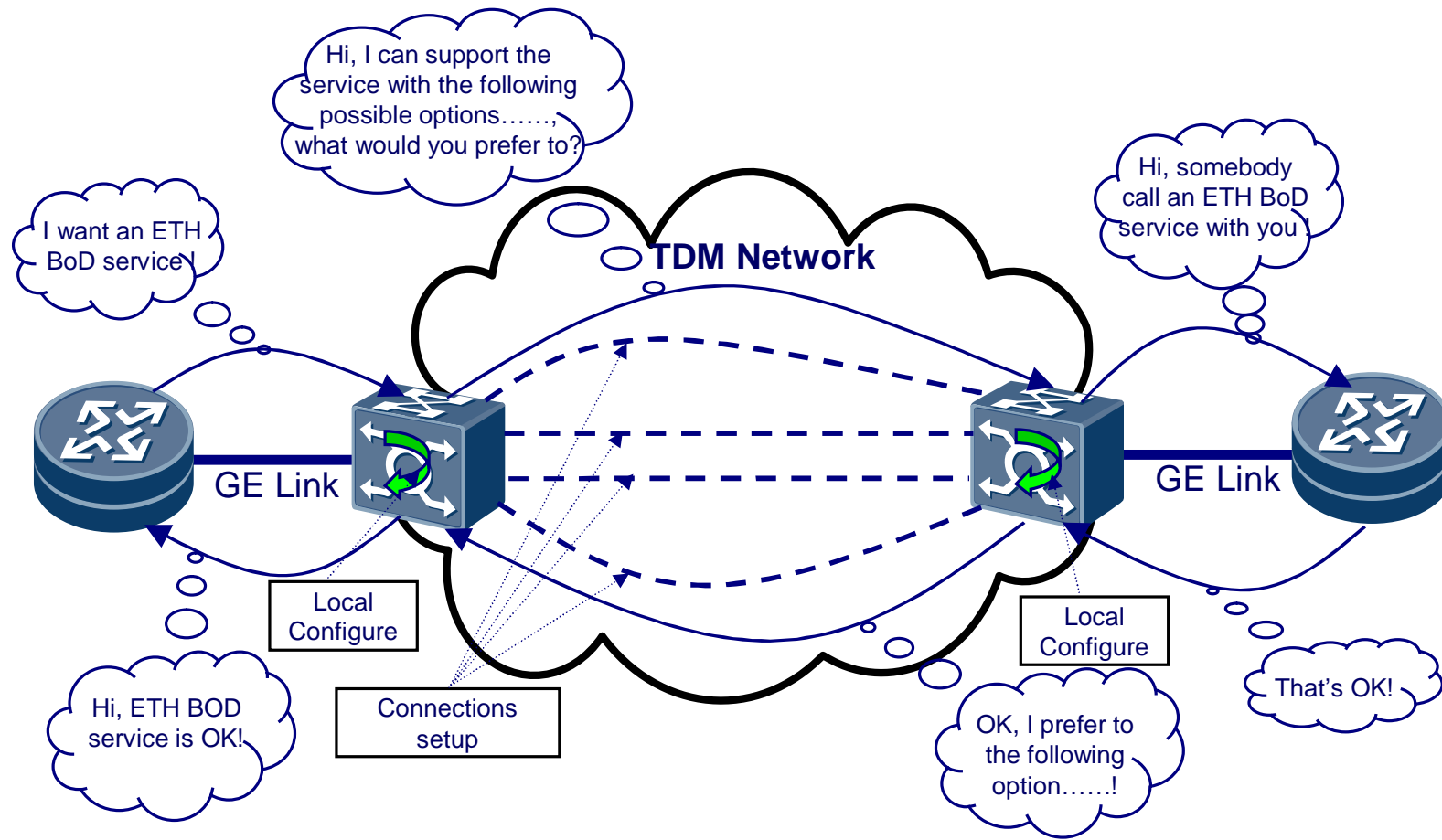
# VCAT Without LCAS When Member Connection Broken



# VCAT With LCAS When Member Connection Broken



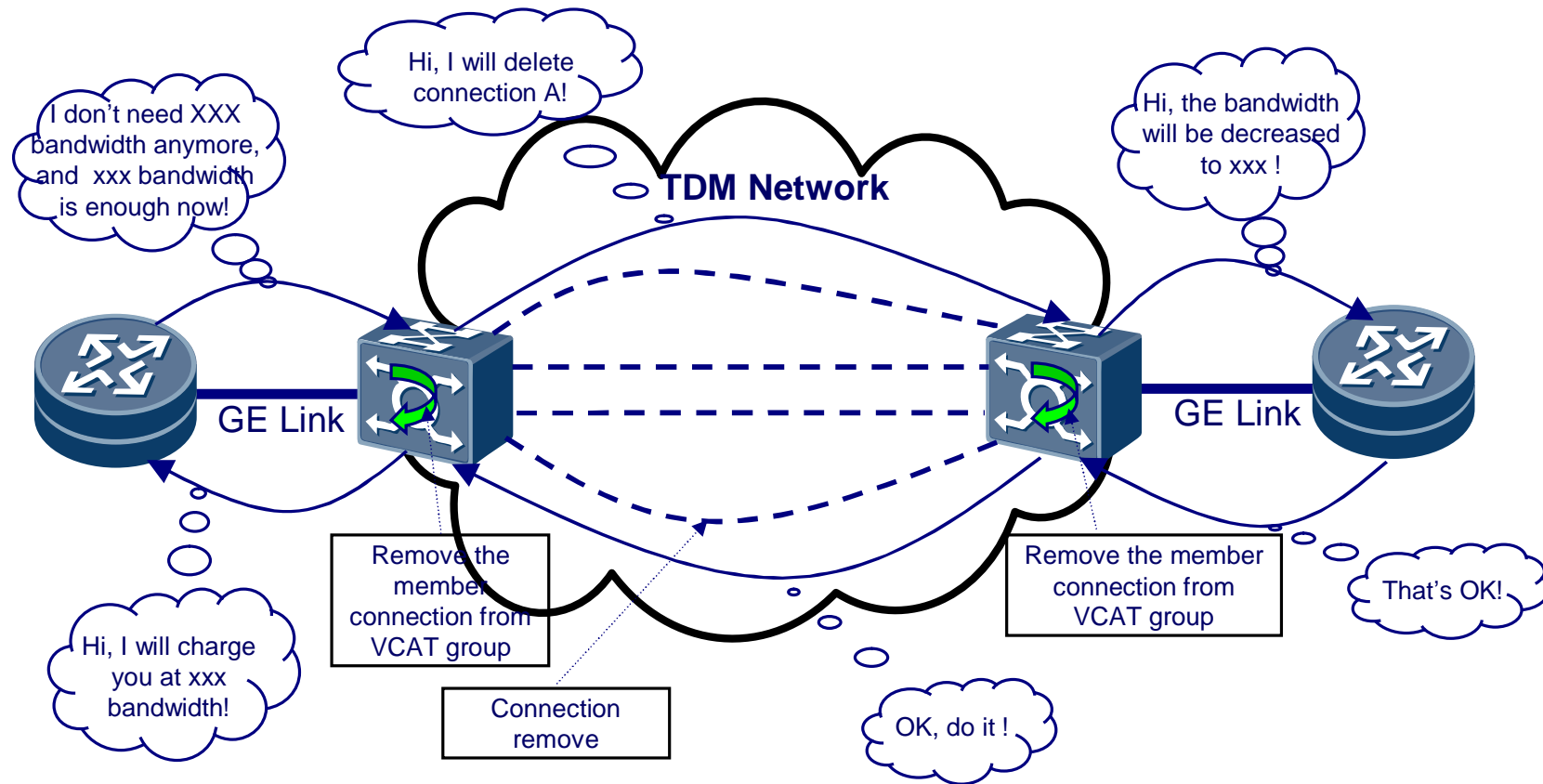
# BoD Service Setup Through GMPLS Call



## Negotiated Parameters

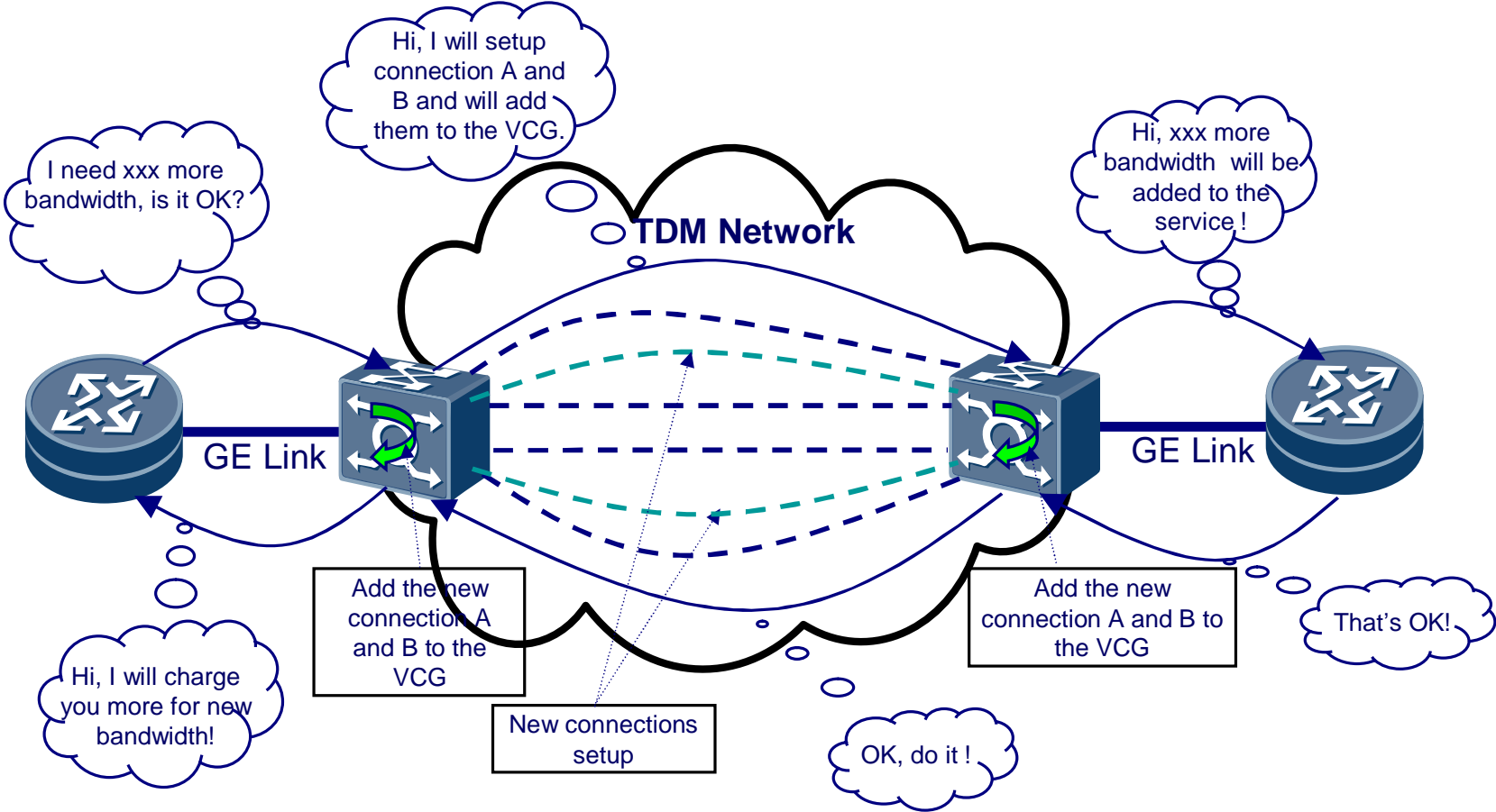
Parameter Name	Possible Options at Source	Preferred Option at Destination
Client Signal Adaptation and Multiplexing Path	<ol style="list-style-type: none"> <li>1. ETH-&gt;GFP-T/F-&gt;VC</li> <li>2. ETH-&gt;GFP-T/F-&gt;ODU</li> <li>3. ETH-&gt;LAPS-&gt;VC</li> <li>4. ETH-&gt;HDLC-&gt;VC</li> </ol>	1. ETH->GFP-T/F->VC
TDM Connection Type/ Needed Number	<ol style="list-style-type: none"> <li>1. SDH VC4 / 30</li> <li>2. OTH ODU1 / 2</li> </ol>	1. SDH VC4 / 30
VCAT Capability	<ol style="list-style-type: none"> <li>1. SDH VC VCAT Capable</li> <li>2. OTH ODU VCAT Capable</li> </ol>	1. SDH VC VCAT Needed
LCAS Capability	<ol style="list-style-type: none"> <li>1. SDH VC LCAS Capable</li> <li>2. OTH ODU LCAS Incapable</li> </ol>	1. SDH VC LCAS Needed
VCG ID	32bit integer value	32bit integer value
Client Signal Type	ETH	ETH
Others	.....	.....

# Bandwidth Decreasing Procedure





# Bandwidth Increasing Procedure



# Impact To Existing Protocol

## GMPLS Signaling

- Ø GMPLS Call- RFC4974 have already supported the negotiation procedure
- Ø The negotiation parameter need be enriched.
  - Possible mapping and adaptation path sets

## GMPLS Routing

Ø If VCG members are co-routed, the differential delay of different member can be ignored, so the routing protocol is not necessary to extended.

Ø If VCG members are diversy-routed, the differential delay of different member should not be ignored, the routing protocol should concern the link and node delay for path calculation.

# Question ?

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# Thank You

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